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Canadian Government

PUBLICATIONS

du Gouvernement canadien

CATALOGUE

12

*Government
Publications*

**Mines Branch and
Mineral Resources Division
ENERGY, MINES AND RESOURCES**

1967

ÉNERGIE, MINES ET RESSOURCES

**Direction des Mines et
Division des Ressources Minérales**


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**CANADIAN GOVERNMENT
PUBLICATIONS**

DU GOUVERNEMENT CANADIEN

•
**ÉNERGIE, MINES ET RESSOURCES
DIRECTION DES MINES ET
DIVISION DES RESSOURCES MINÉRALES**

**MINES BRANCH AND
MINERAL RESOURCES DIVISION
ENERGY, MINES AND RESOURCES**

•
SECTIONAL CATALOGUE No. 12

JULY 1967 JUILLET

BIBLIOGRAPHIE No 12

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THE QUEEN'S PRINTER

L'IMPRIMEUR DE LA REINE

OTTAWA, CANADA

The Canadian Government Publications Sectional Catalogue No. 12: *Department of Energy, Mines and Resources, Mines Branch and Mineral Resources Division Publications* was prepared by the Documents Library, Department of Public Printing and Stationery with the assistance of the Mineral Resources Division of the Department of Energy, Mines and Resources.

3rd edition as Sectional Catalogue No. 12

Note.—To keep this catalogue up-to-date insert under the appropriate headings, the publications listed in the Monthly Catalogue of the Queen's Printer.

La bibliographie n° 12 des publications du Gouvernement du Canada: *Division des publications de la Direction des Mines et de la Division des Ressources minérales, Ministère de l'Énergie, des Mines et des Ressources* a été compilée par la Bibliothèque des documents, Département des Impressions et de la Papeterie Publiques avec la collaboration de la Division des Ressources minérales du Ministère des Mines et des Relevés techniques.

Troisième édition, juillet 1966

Note.—On peut tenir à jour cette bibliographie en insérant aux endroits appropriés, les publications du Ministère qui paraissent dans le Catalogue mensuel de l'Imprimeur de la Reine.

ROGER DUHAMEL, F.R.S.C.
Queen's Printer and
Controller of Stationery

ROGER DUHAMEL, m.s.r.c.
Imprimeur de la Reine et
Contrôleur de la Papeterie

OTTAWA, 1967

PREFACE

In this "Catalogue and Index of Mines Branch and Mineral Resources Division Publications" certain changes have been made.

Issued in the Sectional Catalogue Series of the Documents Library, Department of Public Printing and Stationery, the presentation of the material was adapted to the style of this series. All reports and maps appear in numerical order with the necessary cross-references from English to French versions of the same report, from maps to accompanying reports and from advance chapters or separates to main reports and vice versa. Added to the contents are a few historical notes on the Mines Branch and the Mineral Resources Division. Explanation of the new publication series of these two issuing authorities have been added.

The index was carefully prepared to make it as comprehensive as possible. The subjects, titles, authors (in capital letters), and place names concerned are listed together in one alphabetical order.

To assist in the identification of the publication series of the Mines Branch and the Mineral Resources Division, this catalogue has been divided into five parts:

Part 1—Introduction.

Part 2—The early Mines Branch publications series. It should be noted that some publications of the Mineral Resources Division are included up to 1959.

Part 3—The new publication series of the Mines Branch, commenced in 1958.

Part 4—The new publication series of the Mineral Resources Division, commenced in 1958.

Part 5—Index.

John Convey,
Director,
Mines Branch.

W. Keith Buck,
Chief,
Mineral Resources Division.

Ottawa, June 30, 1967.

PRÉFACE

Cette édition du «Catalogue de la Direction des Mines et de la Division des Ressources minérales» comporte quelques modifications.

Étant publiée dans la série des bibliographies spéciales de la Bibliothèque des documents du Département des Impressions et de la Papeterie Publiques, la présentation de la matière a été adoptée au style de cette série. Tous les rapports et toutes les cartes géographiques sont en ordre numérique avec les renvois réciproques nécessaires des versions anglaises ou françaises d'un même rapport, des cartes géographiques accompagnant ces rapports et des chapitres anticipés ou séparés des rapports principaux. Nous avons cru bon d'ajouter également quelques notes historiques sur la Direction des Mines et la Division des Ressources minérales, ainsi que quelques mots explicatifs des nouvelles séries de documents publiées sous leur autorité.

L'index, aussi complet que possible, a été préparé avec soin. Les auteurs (en majuscule), les titres, les sujets et les noms de lieux ont été groupés en un seul ordre alphabétique.

Pour faciliter l'identification des items publiés par ces organismes, ce catalogue a été divisé en cinq parties:

Partie 1—Introduction.

Partie 2—La série première des publications de la Direction des Mines.
Il est à noter que quelques publications de la Division des Ressources minérales ont été énumérées ici jusqu'à 1959.

Partie 3—La série nouvelle de publications de la Direction des Mines commencée en 1958.

Partie 4—La série nouvelle de publications de la Division des Ressources minérales commencée en 1958.

Partie 5—Index.

John Convey,
Directeur,
Direction des Mines.

W. Keith Buck,
Chef,
Division des Ressources minérales.

Ottawa, le 30 juin 1967.

SECTIONAL CATALOGUE No. 12—BIBLIOGRAPHIE N° 12

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HOW TO ORDER

Publications listed in this catalogue and accompanied by a price may be purchased from the Queen's Printer, Ottawa, or from the Publications Distribution Office, Mines Branch and Mineral Resources Division, Department of Energy, Mines and Resources, Ottawa, Canada.

Remittances must be made in advance of shipment of publications. Cheque or money orders should be made payable to the Receiver General of Canada. Postage stamps are not an acceptable form of currency in Canada.

No extra charge is made for postage on documents forwarded to points in Canada and the United States. To cover cost of postage, 30% is added to the selling price when publications are to be mailed to other countries.

Note.—A limited number of some out-of-print publications and maps are available. Inquiry as to price and availability should be addressed to the Publication Distribution Office, Mines Branch and Mineral Resources Division, Department of Energy, Mines and Resources, Ottawa, Canada.

GUIDE DE L'ACHETEUR

Les publications inscrites dans ce catalogue sont en vente lorsqu'un prix est indiqué. On peut se les procurer en s'adressant soit à l'Imprimeur de la Reine, Ottawa, soit au Bureau de la distribution des publications de la Direction des Mines ou de la Division des Ressources minérales, Ministère de l'Énergie, des Mines et des Ressources, Ottawa, Canada.

Les commandes sont payables à l'avance et les remises se font par mandats-poste ou chèques visés, payables au Receveur général du Canada. Les timbres-poste ne sont pas acceptés.

L'expédition postale pour colis à destination du Canada ou des États-Unis ne comporte pas de frais supplémentaires; pour tous les autres pays, 30% pour les frais de port doit être ajouté au prix de vente.

Avis.—Une quantité limitée de certaines publications et cartes épuisées sont disponibles. Les demandes quant au prix et à la disponibilité doivent être adressées au Bureau de distribution des publications, Direction des Mines et de la Division des Ressources minérales, Ministère de l'Énergie, des Mines et des Ressources, Ottawa, Canada.

**MINES BRANCH AND
MINERAL RESOURCES
DIVISION**

**DIRECTION DES MINES ET
DIVISION DES RESSOURCES
MINÉRALES**

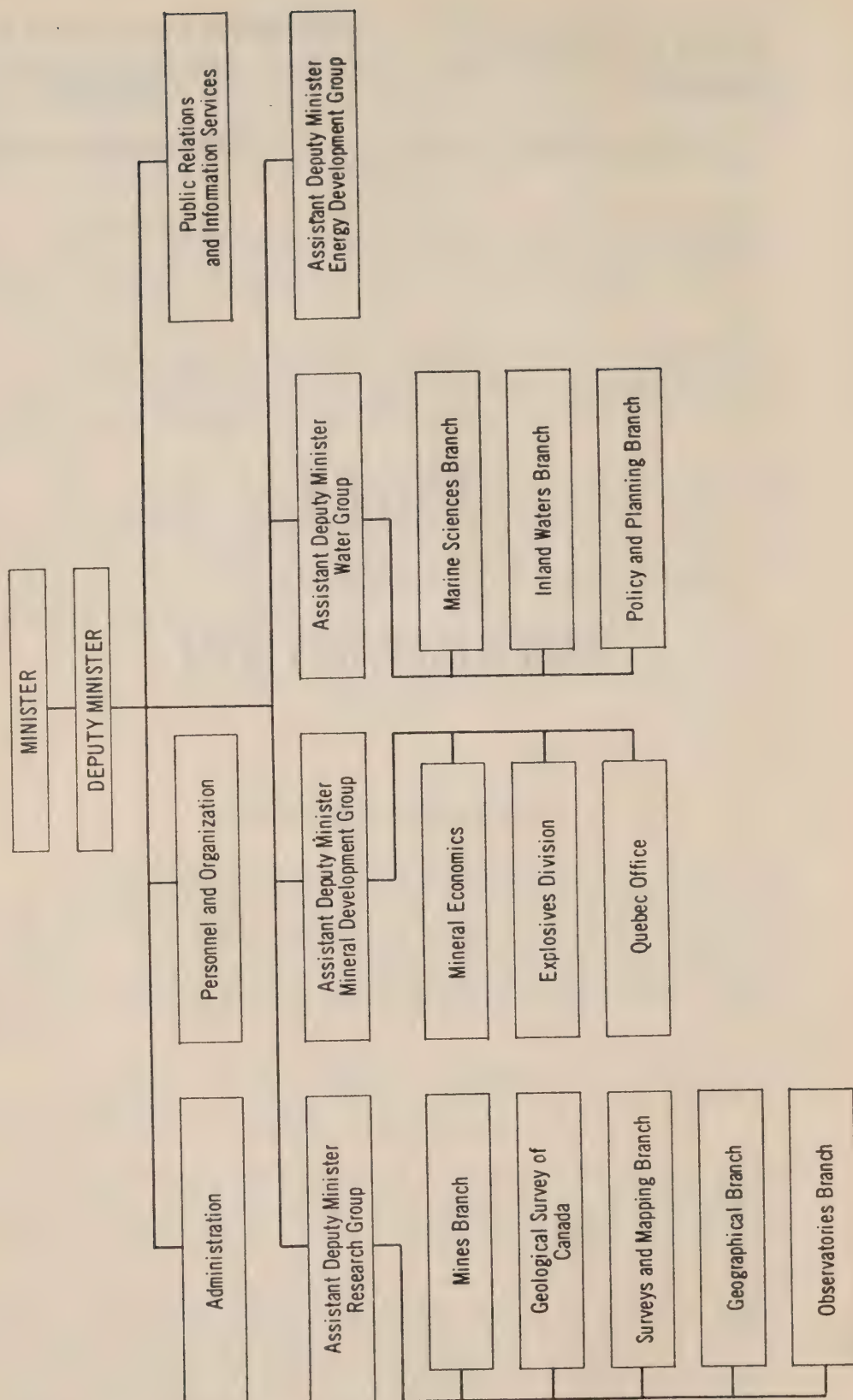
Sectional Catalogue No. 12

Bibliographie n° 12

Part I

INTRODUCTION

DEPARTMENT OF ENERGY, MINES AND RESOURCES



A: HISTORICAL NOTES

1884-1907: Department of the Interior

The appointment of a Superintendent of Mines for Manitoba and Northwest Territories is well explained in the following quotation from the annual report of the Department of the Interior for the year 1884. "The increased accessibility, by means of the Canadian Pacific Railway, now in operation beyond the summit of the Rocky Mountains, and the growing importance of the available mineral resources of the North-West necessitated the appointment of a Superintendent, and Mr. William Pearce, the Inspector of Dominion Land Agencies, was selected for that post." Mr. Pearce was the Superintendent of Mines up to June 5, 1901, when he was transferred to the office of Chief Inspector of Surveys.

The history of the Mineral Resources Division may be said to date back to 1886, when the Division of Mineral Statistics and Mines of the Geological Survey was organized to collect statistics and issue annual reports on the mineral industries of Canada.

A new step was taken towards the organization of the Mines Branch with the appointment, on the 5th of June 1901, of Professor Eugene Haanel, Ph.D., as Superintendent of Mines. In the annual report for the year 1901, the Deputy Minister of the Interior said: "It may be explained in this relation that in view of the recent development of mining industries in the Yukon Territory and other sections of the country where the lands are under control of the Dominion government, it was felt that provision should be made for the appointment of a special technical officer whose scientific knowledge and practical experience in mining matters would fit him to take charge of this particular branch, such officer to advise the department upon the requirements in connection with this service and prepare reliable information for publication."

1907-1936: Department of Mines

The first Department of Mines was created by the Geology and Mines Act, S.C., 1907, chapter 29. The Department was divided into two branches, the Geological Survey and the Mines Branch. By an order in Council dated May 15, 1907, the Mines Branch was transferred from the Department of the Interior to the Department of Mines, and Dr. Haanel shortly afterwards received his appointment as Director of the Mines Branch.

In 1907 the Division of Mineral Statistics and Mines was transferred to become the nucleus of the newly created Mines Branch, as the Division of Mineral Resources and Statistics.

The functions of the Mines Branch were to collect and publish full statistics of the mineral production and of the mining and metallurgical industries of Canada, and such data regarding the economic minerals as relate to the processes and activities connected with their utilization, to make detailed investigations of mining camps and areas containing economic minerals or deposits of other economic substances, and to make such chemical, mechanical and metallurgical investigations as were found expedient to aid the mining and metallurgical industry of Canada.

1936-1949: Department of Mines and Resources

The Department of Mines and Resources which came into being on December 1, 1936, under the authority of chapter 33 of the Statutes of Canada, 1936, was divided into five branches. The functions of the new Department were those of the former Departments of Mines, Interior, Indian Affairs, and Immigration and included, as well, those of the Hydrographic Service Division which previously was part of the old Department of Marine.

The Mines and Geology Branch discharged the duties and activities of the former Department of Mines, together with air and topographical surveys transferred from the Topographical and Air Survey Bureau of the former Department of the Interior. The Branch comprised four main units: the Bureau of Geology and Topography, replacing the former Bureau of Economic Geology; the Bureau of Mines, replacing the former Mines Branch; the National Museum of Canada; and the Dominion Fuel Board.

1949- : Department of Mines and Technical Surveys

The Department of Mines and Technical Surveys was created by an Act of Parliament (13 George VI, chapter 17) which received Royal Assent on December 10, 1949, and came into force by Order in Council P.C. 2/330 of January 20, 1950. Its establishment resulted from the organization of certain former government departments into new departments.

As now constituted, the Department is an integrated organization whose primary functions are to provide technological assistance in the development of Canada's mineral resources through studies, investigations, and research in the fields of geology, mineral dressing, and metallurgy, and to carry out geodetic, topographic, hydrographic, and other surveys of use in the development of Canada's natural resources.

The Department has six branches, namely, the Surveys and Mapping Branch, the Geological Survey of Canada, the Mines Branch, the Dominion Observatories, the Geographical Branch, and the Marine Sciences Branch.

1956

On June 26, 1956, the Mineral Resources Division, was transferred from the Mines Branch to the Office of the Deputy Minister of Mines and Technical Surveys through the Director General of Scientific Services. This organizational change resulted in the Mineral Resources Division setting up its own publication series separate and distinct from the Mines Branch series.

1959

A reorganization regrouped a major part of the function of the Mines Branch into three new Divisions: the Mineral Processing Division, the Extraction Metallurgy Division, and the Mineral Sciences Division. In addition to these, the Mines Branch is composed of the Physical Metallurgy Division, the Fuels and Mining Practice Division, and the Technical Services Division.

B: FUNCTIONS OF THE MINES BRANCH

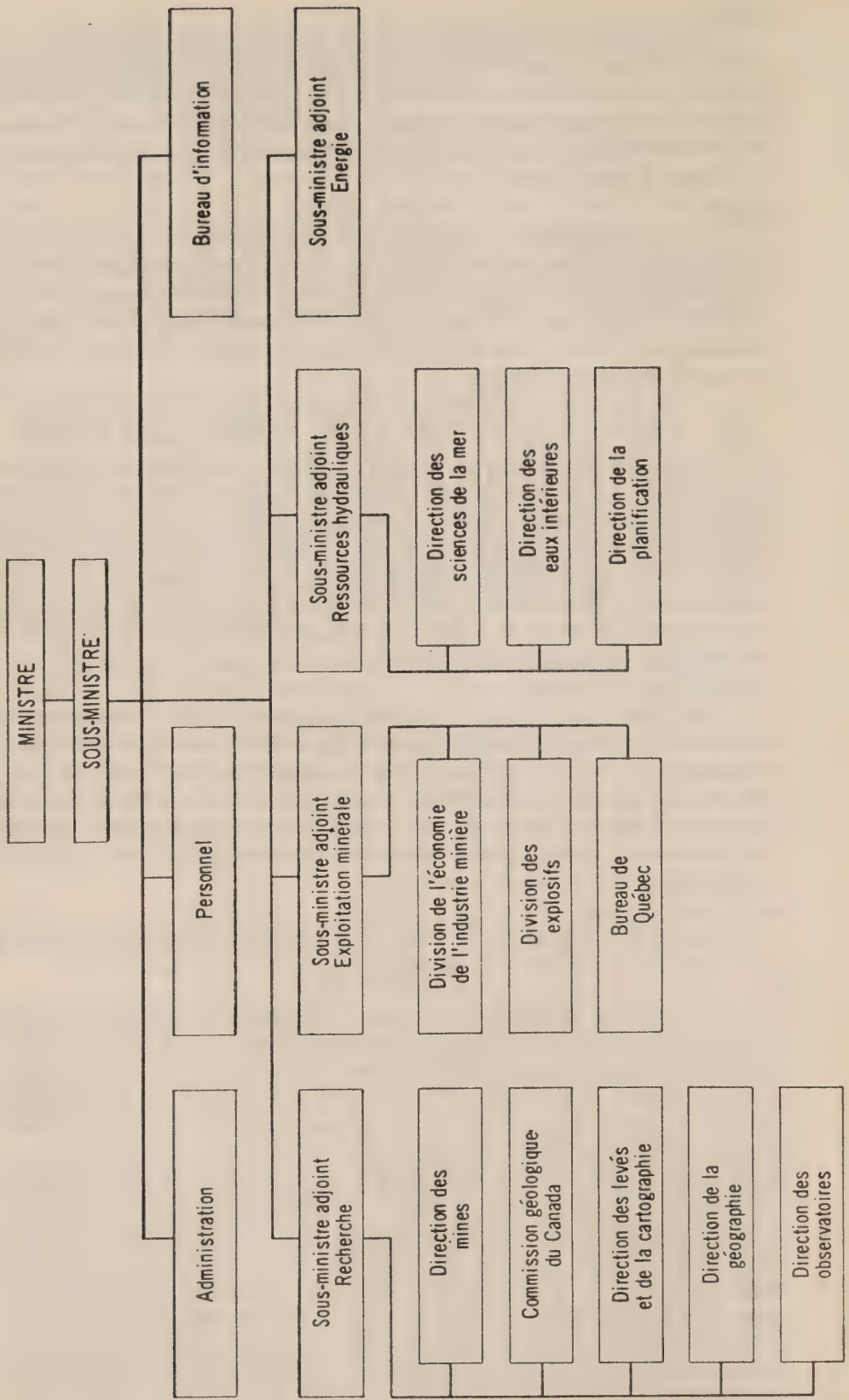
The **Mines Branch** is primarily concerned with the technological problems of the mineral industry and maintains well-equipped ore testing, mineral dressing, fuel research, ceramic, radioactivity, industrial waters and physical metallurgy laboratories to handle these problems. The scope of its activities ranges from relatively minor tests on the lowly sands to fundamental research on the rare metals, from handling routine inquiries to such highly important and specialized assignments as handling the metallurgical problems of the atomic energy project at Chalk River, Ontario.

Within this broad range come tests and research on ores and radioactive minerals designed primarily to work out and to improve treatment methods; investigations on industrial minerals aimed largely toward the greater utilization of Canadian sources of these minerals; work in the ceramic laboratories; intricate studies in the spectrographic and mineralographic laboratories; research on Canadian fuels; and investigations in physical metallurgy.

FUNCTIONS OF THE MINERAL RESOURCES DIVISION

The work of the Division lies in the mineral resources, mineral economics, mineral legislation, mineral taxation, and government administrative fields. The Division has the important role in the Department of Mines and Technical Surveys of advising senior departmental and other government officials on matters affecting Canadian mineral policy. The Division collects, records, compiles and prepares information and advice for the use of the Department, other government departments, Crown corporations, foreign embassies, private industry, and the general public on mineral resources; mining and oil companies; technical-economic aspects of exploration, development, production and marketing; and on mineral industry legislation and taxation. It carries out technical-economic studies on all phases of the Canadian mineral industry, and also maintains a considerable record on the mineral industries of foreign countries. The Division is responsible for the administration of the Emergency Gold Mining Assistance Act.

MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES



Revisé en janvier 1967

A: NOTES HISTORIQUES

1884-1907: Ministère de l'Intérieur

La nomination du premier surintendant des Mines pour le Manitoba et les régions du Nord-Ouest est ainsi justifiée par le ministre de l'Intérieur dans son rapport annuel pour l'année 1884. "La facilité d'accès aux mines, dans la région du Nord-Ouest, par le moyen du Chemin de fer Pacifique, ouvert aujourd'hui jusqu'au delà de la ligne de faite des montagnes Rocheuses, et l'importance croissante de ces richesses minérales, ont rendu nécessaire la nomination d'un surintendant. M. William Pearce, inspecteur des agences des terres fédérales, a été choisi pour remplir le nouvel emploi."

M. Pearce fut surintendant jusqu'au 5 juin 1901 alors qu'il fut promu au poste d'inspecteur en chef des arpentages.

L'histoire de la Division des Ressources minérales remonte à 1886, quand la Division des Statistiques minérales et des Mines de la Commission géologique du Canada fut organisée pour recueillir les statistiques et émettre des rapports annuels sur les industries minérales du Canada.

La nomination, le 5 juin 1901, du professeur Eugène Haanel, Ph.D., minéralogiste de renom, au poste de surintendant des mines, marque une nouvelle étape dans l'histoire de la Division des mines. Le sous-ministre de l'Intérieur, dans son rapport annuel pour l'année 1900-1901 explique ainsi cette nomination d'un spécialiste: "Vu le développement récent de l'industrie minière dans le Yukon et dans d'autres régions où le terrain est sous le contrôle du gouvernement canadien, il devenait nécessaire de nommer un employé spécial dont les connaissances scientifiques et l'expérience en matière minière le rendissent compétent pour cet emploi particulier."

Le nouveau surintendant devait organiser la division pour répondre aux nouvelles exigences et était chargé de la compilation des renseignements exacts et des statistiques officielles concernant les mines dans tout le Canada.

Les premiers rapports de la Division des mines parurent dès 1902.

1907-1936: Ministère des Mines

Le premier ministère des Mines fut créé par la "Loi de la géologie et des mines" sanctionnée le 27 avril 1907 (chapitre 29 des Statuts du Canada, 1907). Le ministère comprend deux sections, l'une appelée Section des Mines, et l'autre, Service géologique (1907, c.29, a. 5).

En vertu d'un arrêté en conseil du 15 mai 1907, la Division des mines du ministère de l'Intérieur fut transférée au nouveau ministère des Mines et le Docteur Eugène Haanel fut nommé peu après, directeur de la Division.

En 1907 la Division des Statistiques minérales et des Mines fut transférée pour devenir le noyau de la nouvelle Division des Mines créée sous le nom de la Division des Ressources minérales et des Statistiques.

D'après la loi (1907, c.29, a. 6.), les fonctions de la section des Mines sont: *a*) de recueillir et publier des statistiques complètes sur la production minérale et les industries minières et métallurgiques du Canada, et toutes informations, au sujet de ses minéraux économiques, se rapportant aux procédés et aux travaux liés à leur utilisation, *b*) de se renseigner en détail sur les camps miniers et les régions contenant des minéraux économiques ou des dépôts d'autres substances économiques, *c*) de faire les recherches chimiques, mécaniques et métallurgiques jugées utiles pour aider l'industrie minière et métallurgique du Canada.

1936-1949: Ministère des Mines et des Ressources

Le ministère des Mines et des Ressources, créé le 1^{er} décembre 1936, en vertu du chapitre 33 des Statuts du Canada de 1936 se compose de cinq divisions dont les fonctions sont celles des anciens ministères des Mines (Division des Mines et de la Géologie), de l'Intérieur (Division des Terres, Parcs et Forêts et des Arpentages et du Génie), des Affaires Indiennes (Division des Affaires Indiennes) et de l'Immigration (Division de l'Immigration).

La division des Mines et de la Géologie remplit les fonctions et accomplit le travail de l'ancien ministère des Mines; elle exécute également les levés topographiques aériens et terrestres dont était chargé auparavant le Service des levés topographiques et aériens de l'ancien ministère de l'Intérieur.

Cette division comprend maintenant quatre services principaux: le Service de Géologie et de Topographie qui remplace l'ancien Bureau de la Géologie appliquée, le Musée national du Canada, le Service des Mines qui remplace l'ancienne Division des Mines, et la Commission fédérale du Combustible.

1949- : Ministère des Mines et des Relevés techniques

Le ministère des Mines et des Relevés techniques a été créé par une loi du Parlement (13 George VI, chapitre 17) qui a reçu la sanction royale le 10 décembre 1949 et est entrée en vigueur par l'arrêté en conseil C.P. 2/330 du 20 janvier 1950. Sa création a résulté de l'organisation d'anciens ministères de l'État en trois nouveaux ministères.

Comme il est présentement constitué, le ministère des Mines et des Relevés techniques forme un organisme complet qui a pour fonction première d'apporter une aide technique à l'exploitation des ressources minérales du Canada au moyen d'études, d'investigations et de recherches dans le domaine de la géologie, de la préparation mécanique du minerai et de la métallurgie, ainsi que dans les relevés topographiques, géodésiques et autres.

Le ministère compte six sections à savoir: la Direction des levés et de la cartographie, la Commission géologique du Canada, la Direction des Mines, les Observatoires fédéraux, la Direction de la géographie et la Direction des Sciences marines.

1956

Le 26 juin 1956, la Division des Ressources minérales fut transférée de la Direction des Mines au Bureau du sous-ministre des Mines et Relevés techniques par le Directeur général des Services scientifiques. Ce changement dans l'organisation provient de ce que la Division des Ressources minérales préparait ses propres séries de publications séparées et distinctes des séries de la Direction des mines.

1959

Une réorganisation regroupa une majeure partie des fonctions de la Direction des mines et trois nouvelles divisions: la Division du traitement des minéraux, la Division de la métallurgie extractive et la Division des sciences minéralogiques. En plus de ces divisions, la Direction des mines se compose de la Division de la métallurgie physique, la Division des combustibles et des techniques minières et la Division des services techniques.

B: FONCTIONS DE LA DIRECTION DES MINES

La **Direction des mines** s'intéresse surtout aux problèmes techniques de l'industrie minérale et possède des laboratoires bien outillés pour faire l'épreuve du minerai, la préparation mécanique des minéraux, les recherches concernant le combustible, la céramique, la radioactivité, les eaux industrielles et la métallurgie physique afin de résoudre ces problèmes. L'étendue de son activité est aussi considérable que les besoins techniques de l'industrie qu'elle dessert. Son domaine comprend les épreuves relativement secondaires concernant les sables jusqu'à la recherche fondamentale des métaux rares ainsi que les investigations courantes jusqu'aux tâches importantes et spécialisées se rattachant à la solution de tous les problèmes métallurgiques de l'entreprise d'énergie atomique à Chalk-River.

Dans ce vaste champ d'action, on peut mentionner: les travaux d'analyse de minerais dont le but principal est d'élaborer et d'améliorer les méthodes de traitement et d'aider ainsi à diminuer le coût du bocardage; les investigations relatives aux minéraux industriels visant en grande partie à une utilisation plus absolue des sources canadiennes de ces minéraux; l'activité dans les laboratoires céramiques; les études compliquées faites dans les laboratoires pectrographiques et minéralogiques; les recherches ayant trait aux combustibles canadiens; les analyses et autres travaux concernant les minéraux radio-actifs et les investigations variées en métallurgie physique.

FONCTIONS DE LA DIVISION DES RESSOURCES MINÉRALES

L'activité de la Division s'étend sur les ressources minérales, l'économie minérale, la législation minérale, la taxation minérale et les champs administratifs du gouvernement. La Division remplit, au sein du Ministère des Mines et des Relevés techniques, le rôle important de fournir des renseignements et des conseils aux officiers supérieurs du ministère et du gouvernement sur les matières affectant la politique minérale canadienne. La Division collecte, enregistre, compile, prépare l'information et donne des conseils sur les ressources minérales pour l'usage du ministère et divers autres ministères, des Corporations de la Couronne, des ambassades étrangères, de l'industrie privée et des particuliers; des Compagnies minières et d'huile; sur les aspects techniques et économiques d'exploration, de développement, de production et du marché; sur la législation minière industrielle et sur la taxation. Elle rédige des études techniques et économiques sur toutes les phases de l'industrie minérale canadienne et maintient un registre considérable sur les industries minérales des pays étrangers. La Division est responsable de l'application de la Loi d'urgence sur l'aide à l'exploitation des mines d'or.

Part II

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REPORTS AND MAPS

RAPPORTS ET CARTES

Reports and magnetic survey maps of economic interest published by the Mines Branch. No. 1-865, 1902-1959.

Rapports de la Direction des mines. N° 1-865, 1902-1959.

Note.—Tous les rapports de la Division des mines n'ont pas été publiés en français. Dans la liste complète qui suit les rapports en anglais ou en français figurent sous leur numéro de série respectif et la référence à l'édition correspondante dans l'autre langue est donnée dans chaque cas.

- 1.—**Report on copper belt and coal lands near Whitehorse, Y.T., and on the mining conditions of the Klondike, Y.T.,** by Eugene Haanel. 1903. 26p. 8 pls., 4 figs., 1 map. (in Sessional Paper No. 25-1903.)

At head of title Appendix to the report of the Superintendent of Mines. (Annual report of the Department of the Interior, 1901-02, Part VI.)

Out of print.

Cat. No. M32-1

- 2.—**Report on the great landslide at Frank, Alberta, 1903,** by R. G. McConnell and R. W. Brock. 1904. 17p. 14 pls., 2 figs., 2 maps. (in Sessional Paper No. 25-1904).

Extract from the Annual report of the Department of the Interior, 1902-03, Part VIII.

Out of print.

Cat. No. M32-2

- 3.—**Report of the Commission appointed to investigate the different electro-thermic processes for the smelting of iron ores, and the making of steel, in operation in Europe,** by Eugene Haanel. 1904. 223p. 24 pls., 64 figs.

Appendix.—Treatise on electro metallurgy of iron, by Henri Harmet.—The electrical manufacture of steel, by Gustave Gin.—Electro-thermic process for the reduction of iron ore, by Ernesto Stassano.—Lecture on the treatment of copper ores by the electric furnace, (Keller process), by M. Ch. Vattier.

Voir le rapport n° 4 pour l'édition française.

Out of print.

Cat. No. M32-3

- 4.—**Rapport de la Commission nommée pour étudier les divers procédés électro-thermiques pour la réduction des minerais de fer et la fabrication de l'acier employés en Europe,** par Eugene Haanel. 1905. 24 planches, 64 figures.

See Report No. 3 for English edition.

Édition épuisée.

N° de cat. M32-4F

- 5.—**On the location and examination of magnetic ore deposits by magnetometric measurements,** by Eugene Haanel. 1904. 132p. 13 pls., 54 figs.

Out of print.

Cat. No. M32-5

- 6.—**Calabogie mine, Bagot township, Renfrew County, Ontario; magnetic survey map, vertical intensity,** by E. Nystrom. 1904. 60' : 1".

See also map No. 249.

Out of print.

Cat. No. M32-6

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—*Continued—Suite.*

- 7.—**Preliminary report on the limestones and the lime industry of Manitoba**, by J. Walter Wells. 1905. 68p. 8 pls., tables.
Out of print. *Cat. No. M32-7*
- 8.—**Preliminary report on the industrial value of the clays and shales of Manitoba**, by J. Walter Wells. 1905. 41p. 9 pls., tables.
Out of print. *Cat. No. M32-8*
- 9.—**Preliminary report on the raw materials, manufacture, and uses of hydraulic cements in Manitoba**, by J. Walter Wells. 1905. 70p. 7 pls.
Out of print. *Cat. No. M32-9*
- 10.—**Mica: its occurrence, exploitation, and uses**, by Fritz Cirkel. 1905. 148p. 1 pl., 38 figs., 2 maps.
Voir le rapport n^o 264 pour l'édition française. See also reports Nos. 118 and 701.
Out of print. *Cat. No. M32-10*
- 11.—**Asbestos: its occurrence, exploitation and uses**, by Fritz Cirkel. 1905. 170p. 19 pls., 1 map.
See also Reports Nos. 69 and 707.
Out of print. *Cat. No. M32-11*
- 12.—**Report of the Commission appointed to investigate the zinc resources of British Columbia and the conditions affecting their exploitation**, by Walter Renton Ingalls, and others. 1905. 399p. 68 pls., 32 figs., 2 maps.
Out of print. *Cat. No. M32-12*
- 13.—**Belmont iron mines**, Belmont township, Peterborough county, Ontario; **magnetic survey map**, vertical intensity, by B. F. Haanel. 1905. 60' : 1".
See also map No. 186.
Out of print. *Cat. No. M32-13*
- 14.—**Wilbur Mine**, Lavant township, Lanark county, Ontario; **magnetic survey map**, by B. F. Haanel. 1905. 60' : 1".
See also map No. 441.
Out of print. *Cat. No. M32-14*
- 15.—**Iron ore deposits at Austin Brook**, Gloucester county, New Brunswick; **magnetic survey map**, vertical intensity, by E. Lindeman. 1906.
Out of print. *Cat. No. M32-15*
- 16.—**Report of the experiments at Sault Ste. Marie, Ontario, under Government auspices, in the smelting of Canadian iron ores by the electro-thermic process**, by Eugene Haanel. 1907. 140p. 23 pls., 21 figs., tables.
This includes the Preliminary Report No. 16A, published in 1906.
Out of print. *Cat. No. M32-16*
- 16A.—**Preliminary report on the experiments made at Sault Ste. Marie, Ont., under Government auspices, in the smelting of Canadian iron ores by the electro-thermic process**, by Eugene Haanel. 1906. 23p. 4 pls., tables.
See also report No. 16.
Out of print. *Cat. No. M32-16A*

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 17.—**Report on the present and prospective output of the mines of the silver-cobalt ores of the Cobalt district**, by Eugene Haanel. 1907. 13p.
Out of print. Cat. No. M32-17
- 18.—**Graphite: its properties, occurrence, refining, and uses**, by Fritz Cirkel. 1907. 307p. 20 pls., 52 figs., 44 tables, 9 maps.
Voir le rapport n° 202 pour l'édition française. See also report No 511.
Out of print. Cat. No. M32-18
- 19.—**Peat and lignite: their manufacture and uses in Europe**, by E. Nystrom. 1908. 247p. 34 pls., 228 figs., tables.
Voir le rapport n° 198 pour l'édition française.
Out of print. Cat. No. M32-19
- 20.—**Report on the iron ore deposits of Nova Scotia (Part I)**, by J. E. Woodman. 1909. 226p. 63 pls. or maps.
Out of print. Cat. No. M32-20
- 21.—**Summary report of the Mines Branch of the Department of Mines for the fiscal year 1907-08**. 1908. 100p. 1 fig., tables. (Sess. Paper No. 26a-1908).
Contents.—DIRECTORS' REPORT, by Eugene Haanel.—*Special reports: Iron ore deposits of Vancouver and Texada islands*, by E. Lindeman; *Alleged iron ore deposits of Ontario and Quebec*, by B. F. Haanel; *Visit of gas producer plants in and around New York*, by B. F. Haanel; *Mineral production in 1907* (see report No. 27).—*Appendices: Comparison of induction furnaces employed for production of steel*, by A. Grönwall; *Experiments in intensified nitrification, by means of peat beds*, by Müntz and Lainé.
Voir le rapport n° 21A pour l'édition française.
Out of print. Cat. No. M32-21
- 21A.—**Rapport sommaire de la Division des mines du ministère des Mines pour l'exercice 1907-08**. 1908. 111p. 1 figure, tableaux. (Doc. parl. n° 26a-1908.)
Sommaire.—RAPPORT DU DIRECTEUR, par Eugene Haanel.—RAPPORTS SPÉCIAUX: *Gisements de fer de l'île de Vancouver*, par E. Lindeman; *Gisements de fer dans les provinces de Québec et Ontario*, par B. F. Haanel; *Installations de gazogères aux États-Unis*; par B. F. Haanel; *Rapport préliminaire sur la production minérale du Canada en 1907*, par John McLeish.—*Appendices: Comparaisons des divers fours à induction usités dans la fabrication de l'acier*, par A. Grönwall; *Extrait des travaux de MM. Muntz et Lainé sur la nitrification intensive*.
See report No. 21 for English edition.
Édition épuisée. N° de cat. M32-21F
- 22.—**Report on the examination of some iron ore deposits in the districts of Thunder Bay and Rainy River, Province of Ontario**, by F. Hille. 1908. 65p. 7 pls., 18 figs. or maps.
Out of print. Cat. No. M32-22
- 23.—**Report on the iron ore deposits along the Ottawa (Quebec side) and Gatineau rivers**, by Fritz Cirkel. 1909. 147p. 5 pls., 15 figs., 2 maps.
See maps Nos. 53 and 54.
Out of print. Cat. No. M32-23

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Reports and maps—Rapports.—Continued—Suite.

- 24.—**Report on the mining and metallurgical industries of Canada, 1907-08.** 1908. 972p. 75 pls., 16 figs., 6 maps.

See also report No. 597.

\$1.30

Cat. No. M32-24

- 25.—**Report on the tungsten ores of Canada,** by T. L. Walker. 1909. 56p. 10 pls., 6 figs.

Voir le rapport n° 156 pour l'édition française.

Out of print.

Cat. No. M32-25

- 26.—**Annual report on the mineral production of Canada during the calendar year 1906,** by John McLeish. 1909. 182p. Tables. (Sess. Paper No. 26b-1908.)

Voir le rapport n° 26A pour l'édition française.

Out of print.

Cat. No. M32-26

- 26A.—**Rapport annuel de la production minérale du Canada, durant l'année 1906,** par John McLeish. 1909. 182p. Tableaux. (Doc. parl. n° 26b-1908.)

See report No. 26 for English edition.

Édition épuisée.

N° de cat. M32-26F

- 27.—**Preliminary report on the mineral production of Canada in 1907,** by John McLeish. 1908. 15p. Tables.

Separate part of report No. 21.

Out of print.

Cat. No. M32-27

- 27A.—**Preliminary report on the mineral production of Canada in 1908,** by John McLeish. 1909. 16p. Tables.

Separate part of report No. 28.

Out of print.

Cat. No. M32-27A

- 28.—**Summary report of the Mines Branch of the Department of Mines for the nine months ending December 31, 1908.** 1909. 96p. Tables. (Sess. Paper No. 26a-1909.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—*Coal tests at McGill University*, by J. B. Porter.—*Reports: Chemical Laboratories*, by F. G. Wait; *Division of Mineral Resources and Statistics*, by John McLeish; *Assay Office, Vancouver*, by G. Middleton.—PRELIMINARY REPORTS ON FIELD WORK: *Tungsten ores of Canada*, by T. L. Walker; *Chrome iron ores and asbestos in province of Quebec*, by Fritz Cirkel; *Iron ores of Nova Scotia, part II*, by J. E. Woodman; *Iron ore deposits in New Brunswick and Northwestern Ontario*, by E. Lindeman; *Magnetometric survey of the Huron Mountain mine*, by B. F. Haanel; *Magnetite iron ore deposits in Mayo Township, Ont.*, by Howells Fréchette; *Smelting of titaniferous iron ores in the electric furnace of Welland, Ont.*, by B. F. Haanel; *Coal samples for testing Canadian coals at McGill University*, by Theophile Denis; *Tests made in Scotland of oil-shales sent from New Brunswick*, by R. W. Ells; *Peat bogs of Canada*, by E. Nystrom and A. Anrep; *Coal and coal mining in Nova Scotia*, by Joseph G. S. Hudson; *Gypsum deposits and industry of Nova Scotia and New Brunswick*, by W. F. Jennison; *Visit to some producer gas plants in and around Berlin, Germany*, by B. F. Haanel.—**Appendices:** *Progress of electric smelting in Norway*, by O. Stalhane; *Mineral production, 1908* (see report No. 27A).

Voir le rapport n° 28A pour l'édition française.

Out of print.

Cat. No. M32-28

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Reports and maps—Rapports.—Continued—Suite.

- 28A.—**Rapport sommaire de la Division des Mines du ministère des Mines, pour les neuf mois finissant le 31 décembre 1908.** 1909. 110p. Tableaux (Doc. parl. n° 26a-1909.)

Sommaire.—RAPPORT GENERAL DU DIRECTEUR, par Eugene Haanel.—RAPPORTS: *Essais de charbon à l'université McGill*, par J. B. Porter; *Laboratoires de chimie*, par F. G. Wait; *Bureau des ressources minières et des statistiques*, par John McLeish; *Essayerie du Dominion à Vancouver*, par G. Middleton.—RAPPORTS PRÉLIMINAIRES DES TRAVAUX DE RECHERCHES: *Minerais de tungstène*, par T. L. Walker; *Minerais de fer chromé et amiante de la province de Québec*, par Fritz Cirkel; *Minerais de fer de la Nouvelle-Écosse, 2^e campagne*, par J. E. Woodman; *Gisements de minerai de fer au Nouveau-Brunswick et dans le nord-ouest d'Ontario*, par Einar Lindeman; *Relevé magnétique du mont Huron*, par B. F. Haanel; *Gisements de magnétite du township Mayo, Ont.*, par Howells Fréchette; *Essai de fonte de minerai de fer titanifère dans le four électrique de Welland, Ont.*, par B. F. Haanel; *Prélèvement d'échantillons de charbon pour les essais de charbons canadiens à l'université McGill*, par Théophile Denis; *Essais effectués en Écosse, sur les schistes pétrolifères envoyés du Nouveau-Brunswick*, par R. W. Ells; *Les tourbières du Canada*, par E. Nystrom et S. A. Anrep; *La houille et l'extraction de la houille en Nouvelle-Écosse*, par Joseph G. S. Hudson; *Les dépôts et l'industrie du gypse en Nouvelle-Écosse et au Nouveau-Brunswick*, par W. F. Jennison; *Visite à quelques installations de gazogène dans la cité de Berlin et aux alentours*, par B. F. Haanel.—**Annexes:** *Progrès de la fonte électrique en Norvège*, par O. Stalhane; *Production minérale en Canada 1907-08*, par John McLeish.

See report No. 28 for English edition.

Édition épuisée.

N° de cat. M32-28F

- 29.—**Report on the chrome iron ore deposits in the Eastern Townships, province of Quebec**, by Fritz Cirkel. 1909. 141p. 11 pls., 15 figs., tables, 1 map.

APPENDICES: I—*Notes on the metallurgy of chromium*, by W. Borchers. II—*Experiments with chromite at McGill University under the direction of J. B. Porter.*

Voir le rapport n° 226 pour l'édition française. See also map No. 57.

Out of print.

Cat. No. M32-29

- 30.—**Investigation of the peat bogs and peat fuel industry of Canada during the season 1908-09**, by Erik Nystrom and S. A. Anrep. Second edition. 1909. 25p. 6 maps. (Bulletin No. 1.)

See maps Nos. 36, 37, 38, 39, 40, and 41.

35c.

Cat. No. M32-30

- 31.—**The production of cement in Canada during the calendar year 1908**, by John McLeish. 1909. 4p. Tables.

Advance chapter of report No. 58.

Out of print.

Cat. No. M32-31

- 32.—**Report on the investigation of an electric shaft furnace, Domnarfvet, Sweden**, by Eugene Haanel. Second edition. 1909. 40p. 5 pls., 8 figs.

35c.

Cat. No. M32-32

- 33.—**Mayo township, lot 1, concession VI, Hastings county, Ontario; (magnetite occurrence) magnetometric survey map, vertical intensity**, by Howells Fréchette. 1909. 60' : 1"

See also map No. 191.

Out of print.

Cat. No. M32-33

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Reports and maps—Rapports.—Continued—Suite.

- 34.—**Mayo township**, lots 2 and 3, concession VI, Hastings county, Ontario; (magnetite occurrence) **magnetometric survey map**, vertical intensity, by Howells Fréchette. 1909. 60' : 1".
See also map No. 191.
Out of print. *Cat. No. M32-34*
- 35.—**Mayo township**, lots 10, 11, and 12, concession IX, and lots 11 and 12, concession VIII, Hastings county, Ontario; (magnetite occurrence) **magnetometric survey map**, by Howells Fréchette. 1909. 60' : 1".
See also map No. 191.
Out of print. *Cat. No. M32-35*
- 36.—**Mer Bleue peat bog**, Gloucester township, Carleton county, and Cumberland township, Russel county, Ontario; **survey map**, by Erik Nystrom and A. Anrep. 1909. 1056' : 1".
Accompanying report No. 30.
Out of print. *Cat. No. M32-36*
- 37.—**Alfred peat bog**, Alfred and Caledonia townships, Prescott county, Ontario; **survey map**, by Erik Nystrom and A. Anrep. 1909. 1056' : 1".
Accompanying report No. 30.
Out of print. *Cat. No. M32-37*
- 38.—**Welland peat bog**, Wainfleet and Humberstone townships, Welland county, Ontario; **survey map**, by Erik Nystrom and A. Anrep. 1909. 1056' : 1".
Accompanying report No. 30.
Out of print. *Cat. No. M32-38*
- 39.—**Newington peat bog**, Osnabruck, Roxborough and Cornwall townships, Stormont county, Ontario; **survey map**, by Erik Nystrom and A. Anrep. 1909. 1056' : 1".
Accompanying report No. 30.
Out of print. *Cat. No. M32-39*
- 40.—**Perth peat bog**, Drummond township, Lanark county, Ontario; **survey map**, by Erik Nystrom and A. Anrep. 1909. 1056' : 1".
Accompanying report No. 30.
Out of print. *Cat. No. M32-40*
- 41.—**Victoria Road peat bog**, Bexley and Carden townships, Victoria county, Ontario; **survey map**, by Erik Nystrom and A. Anrep. 1909. 200' : 1".
Accompanying report No. 30.
Out of print. *Cat. No. M32-41*
- 42.—**The production of iron and steel in Canada during the calendar years 1907 and 1908**, by John McLeish. 1909. 35p. Tables.
Advance chapter of report No. 58.
Out of print. *Cat. No. M32-42*

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Reports and maps—Rapports.—*Continued—Suite.*

- 43.—The production of chromite in Canada during the calendar years 1907-08, by John McLeish. 1909. 6p. Tables.
Advance chapter of report No. 58.
Out of print. *Cat. No. M32-43*
- 44.—The production of asbestos in Canada during the calendar years 1907-08, by John McLeish. 1909. 8p. Tables.
Advance chapter of report No. 58.
Out of print. *Cat. No. M32-44*
- 45.—The production of coal, coke, and peat in Canada during the calendar years 1907 and 1908, by John McLeish. 1909. 34p. Tables.
Advance chapter of report No. 58.
Out of print. *Cat. No. M32-45*
- 46.—Production of natural gas and petroleum in Canada during the calendar years 1907 and 1908. 1909. 16p. Tables.
Advance chapter of report No. 58.
Out of print. *Cat. No. M32-46*
- 47.—Iron ore deposits of Vancouver and Texada islands, British Columbia, by Einar Lindeman. 1910. 29p. 5 maps.
See maps No. 48, 49, 50, 51 and 52.
Out of print. *Cat. No. M32-47*
- 48.—Magnetic survey of Iron Crown claim at Klaanch River, Vancouver Island, B.C.; map of vertical intensity, by E. Lindeman. 1908. 60' : 1".
Accompanying report No. 17. See also map 442.
Out of print. *Cat. No. M32-48*
- 49.—Magnetic survey of the Western Steel Iron claim at Sechart, Vancouver Island, B.C.; map of vertical intensity, by E. Lindeman. 1908. 60' : 1".
Accompanying report No. 47. See also map No. 438.
Out of print. *Cat. No. M32-49*
- 50.—Vancouver Island, B.C.; index map to iron ore deposits of Vancouver and Texada islands, by E. Lindeman. 1910. 24m : 1".
Accompanying report No. 47.
Out of print. *Cat. No. M32-50*
- 51.—Iron mines, Texada Island, B.C.; map, by F. H. Shepherd. 1908. 500' : 1".
Accompanying report No. 47.
Out of print. *Cat. No. M32-51*
- 52.—Sketch map of bog iron ore deposits, West Arm, Quatsino Sound, Vancouver Island, B.C., by L. Frank. 1908. 100' : 1".
Accompanying report No. 47.
Out of print. *Cat. No. M32-52*

Reports and maps—Rapports.—Continued—Suite.

- 53.—**Iron ore occurrences, Ottawa and Pontiac counties, Quebec; map,** by James White and Fritz Cirkel. 1908. 4m : 1".

Accompanying report No. 23.

Out of print.

Cat. No. M32-53

- 54.—**Iron ore occurrences, Argenteuil county, Quebec; map,** by James White and Fritz Cirkel. 1908. 4m : 1".

Accompanying report No. 23.

Out of print.

Cat. No. M32-54

- 55.—**Joint report on the bituminous or oil-shales of New Brunswick and Nova Scotia,** also, on the oil shale industry of Scotland. (Part I) Economics, and, (Part II) Geology, by R. W. Ells. 1909-1910. 1 vol. Prepared in cooperation with the Geological Survey Branch.

Contents.—PART I: *Report on tests made in Scotland of oil-shale sent from New Brunswick in the Spring of 1908, with a view of ascertaining its economic value; especially as regards the yield of crude oil, and sulphate of ammonia,* by R. W. Ells; with an appendix; *The technology of the Scottish shale oil industry,* by W. A. Hamor, 1910, 61p. 15 pls., 6 figs., tables. (Mines Branch report 55).—PART II: *Geological position and character of the oil-shale deposits of Canada,* by R. W. Ells. 1909. 75p. Tables. (Geological Survey Branch report 1107.)

Voir le rapport n° 56 pour l'édition française.

Out of print.

Cat. No. M32-55

- 56.—**Rapport conjoint sur les schistes bitumineux ou pétrolifères du Nouveau-Brunswick et de la Nouvelle-Écosse,** ainsi que sur l'industrie des schistes pétrolifères de l'Écosse. Première partie: Industrie; seconde partie: Géologie, par R. W. Ells. 1914. 65+86p. 15 planches, 6 figures, tableaux. (Rapport de la Commission géologique n° 1108.)

See report No. 55 for English edition.

Édition épuisée.

N° de cat. M32-56F

- 57.—**The productive chrome iron ore district of Quebec; map,** by Fritz Cirkel. 1909. 1m : 1".

Accompanying report No. 29.

Out of print.

Cat. No. M32-57

- 58.—**Annual report on the mineral production of Canada during the calendar years 1907 and 1908,** by John McLeish. 1910. 286p. Tables.

See reports No. 31, 42, 43, 44, 45, and 46, for advance chapters.

Out of print.

Cat. No. M32-58

- 59.—**Report of analysis of ores, non-metallic minerals, fuels, etc.,** made in the Chemical Laboratories during the years 1906, 1907, 1908, arranged by F. G. Wait. 1909. 126p. 2 pls., tables.

Appendix: *Description of commercial methods and apparatus for the analysis of oil-shales,* by H. A. Leverin.

35c.

Cat. No. M32-59

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Reports and maps—Rapports.—Continued—Suite.

- 60.—**Bristol mine**, Pontiac county, Quebec; **magnetometric survey map, vertical intensity**, by E. Lindeman. 1909. 200' : 1".
Accompanying report No. 67. See also map No. 443.
Out of print.

Cat. No. M32-60

- 61.—**Bristol mine**, Pontiac county, Quebec; **topographical map**, by E. Lindeman. 1909. 200' : 1".
Accompanying report No. 67.
Out of print.

Cat. No. M32-61

- 62.—**Preliminary report on the mineral production of Canada, during the calendar year 1909**, by John McLeish. 1910. 18p. Tables.
Out of print.

Cat. No. M32-62

- 63.—**Summary report of the Mines Branch of the Department of Mines for the calendar year 1909**. 1910. 181p. 4 pls., tables. (Sess. Paper No. 26a-1910.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—Coal test at McGill University, by J. B. Porter.—REPORTS ON WORK: Chemical Laboratories, by F. G. Wait; Division for Mineral Resources and Statistics, by John McLeish; Dominion of Canada Assay Office, Vancouver, by G. Middleton.—PRELIMINARY REPORTS ON FIELD WORK: Molybdenum ores of Canada, by T. L. Walker; Magnetic concentration of iron and copper nickel ores, by Geo. C. Mackenzie; Manganese ore deposits in Nova Scotia and New Brunswick, by Théophile C. Denis; Iron ores and metallurgical limestones of Nova Scotia, 3rd season, by J. E. Woodman; Magnetic survey of some mining locations at Temagami, Ont., by Einar Lindeman; copper mining industry in Quebec; by Alfred W. G. Wilson; Nicolet antimony mine, Spalding iron locations, talc and soapstone in Mégantic county, Quebec, by Alfred G. Wilson; Iron ore properties in Northeastern Ontario, by Howells Fréchette; Gypsum resources of Nova Scotia, by W. F. Jennison; Asbestos deposits in the province of Quebec, by Fritz Cirkel; Iron ore occurrences in the provinces of Ontario, Quebec and New Brunswick, by B. F. Haanel; Harris peat gas process, by B. F. Haanel; Peat bogs of Canada, by A. Anrep; Coal mining in Nova Scotia, by Joseph G. S. Hudson; Accidents in mines, by Joseph G. S. Hudson.—**Appendices:** Mineral production in Canada in 1909 (See report No. 62); Description of commercial methods and apparatus for the analysis of oil-shales, by Harold Leverin; Prevention of mine explosions; Examination of magnetic ore deposits, by Howells Fréchette.

Voir le rapport n° 63A pour l'édition française.

Out of print.

Cat. No. M32-63

- 63A.—**Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile 1909**. 1910. 176p. 4 planches, tableaux. (Doc. sessionnel n° 26a-1910.)

Sommaire.—RAPPORT GÉNÉRAL DU DIRECTEUR, par Eugene Haanel.—RAPPORTS: Essais de charbon à l'Université McGill, par J. B. Porter; Laboratoires de chimie, par F. G. Wait; Bureau des ressources et statistiques minières, par John McLeish; Essayerie de la Puissance du Canada, Vancouver, par G. Middleton.—Rapports préliminaires des travaux de recherches: Minerais de molybdène au Canada, par T. L. Walker; Concentration magnétique des minerais de fer et de cuivre-nickel, par Geo. C. Mackenzie; Gisements de minerai de manganèse en Nouvelle-Écosse et Nouveau-Brunswick, par Théophile C. Denis; Minerais de fer et calcaires métallurgiques de Nouvelle-Écosse, 3^e campagne, par J. E. Woodman; Relevé magnétique de quelques emplacements miniers à Temagami, Ont., par Einar Lindeman; Industrie des mines de cuivre dans Québec, par Alfred W. G. Wilson; Mine d'antimoine de Nicolet, emplacement de fer de Spalding, et, existence de talc et de saponite dans le comté de Mégantic, Québec, par Alfred W. G. Wilson;

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Gîtes de minerai de fer dans le nord-est d'Ontario, par Howells Fréchette; Ressources de gypse de la Nouvelle-Écosse, par W. F. Jennison; Gisements d'amiante de la province de Québec, par Fritz Cirkel; Gîtes de minerai de fer signalés dans les provinces d'Ontario, Québec et Nouveau-Brunswick, par B. F. Haanel; Recherche sur le procédé de gaz de tourbe de Harris, par B. F. Haanel; Tourbières du Canada, par A. Anrep; Extraction de la houille en Nouvelle-Écosse, et, Accidents dans les mines par Joseph G. S. Hudson.—Annexes: Rapport préliminaire de la production minérale, 1909, par John McLeish; Méthode commerciale pour l'analyse des schistes pétrolifères, par H. Leverin; Prévention des explosions de mines; Examen des gisements de minerai magnétique, par Howells Fréchette.

See report No. 63 for English edition.

Édition épuisée.

N^o de cat. M32-63F

- 64.—Index map of part of the province of Nova Scotia showing distribution of occurrences of gypsum, by W. F. Jennison. 1911. 15m : 1". Accompanying report No. 84.
Out of print. Cat. No. M32-64

- 65.—Index map of part of the province of New Brunswick showing distribution of occurrences of gypsum, by W. F. Jennison. 1911. 20m : 1". Accompanying report No. 84.
Out of print. Cat. No. M32-65

- 66.—Map of the Magdalen Islands showing gypsum deposits, by W. F. Jennison. 1911. 1½m : 1". Accompanying report No. 84.
Out of print. Cat. No. M32-66

- 67.—Iron ore deposits of the Bristol mine, Pontiac County, Que.; magnetometric survey, etc., by E. Lindeman: Magnetic concentration of ores, by Geo. C. Mackenzie. 1910. 15p. 2 pls., 2 figs., 2 maps. (Bulletin No. 2.)
Voir le rapport n^o 314 pour l'édition française. See maps No. 60 and 61.
30c. Cat. No. M32-67

- 68.—Recent advances in the construction of electric furnaces for the production of pig iron, steel, and zinc, by Eugene Haanel. 1910. 76p. 1 pl., 17 figs. (Bulletin No. 3.)
Voir le rapport n^o 263 pour l'édition française.
Out of print. Cat. No. M32-68

- 69.—Chrysotile-asbestos: its occurrence, exploitation, milling, and uses, by Fritz Cirkel. Second edition. 1910. 316p. 66 pls., 88 figs., 2 maps.
Appendix: *The testing of heat-insulating materials, by Frederick Bacon.*
Voir le rapport n^o 81 pour l'édition française. See also report No. 707 and maps No. 78 and 86.
Out of print. Cat. No. M32-69

- 70.—Northeast Arm iron range, Lake Temagami, Nipissing district, Ontario; magnetometric survey map, by E. Lindeman. 200' : 1".
See Summary report No. 63. See also map No. 444.
Out of print. Cat. No. M32-70

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Reports and maps—Rapports.—*Continued—Suite.*

- 71.—Investigation of the peat bogs and peat industry of Canada during the season 1909-10, by Aleph Anrep. Second edition. 1910. 44p. 17 pls., 6 figs., 6 maps. (Bulletin No. 4.)
Appendices.—Mr. Alf. Larson's paper on Dr. M. Ekenberg's wet-carbonizing process, translated by A. Anrep from "*Teknisk Tidskrift*", No. 12, December 26, 1908.—Lieut. Ekelund's pamphlet entitled "*A solution of the peat problem*", 1909, describing the Ekelund process for the manufacture of peat powder, translated by Harold A. Leverin. (Note: The first edition does not contain the translation of Lieut. Ekelund's pamphlet.)
 Voir le rapport n^o 196 pour l'édition française.
 See maps No. 72, 73, 74, 75, 76, and 77.
 Out of print. Cat. No. M32-71
- 72.—Brunner peat bog, Perth county, Ontario; map, by A. Anrep. 1910. 1056' : 1".
 Accompanying report No. 71.
 Out of print. Cat. No. M32-72
- 73.—Komoka peat bog, Middlesex county, Ontario; map, by A. Anrep. 1910. 1000' : 1".
 Accompanying report No. 71.
 Out of print. Cat. No. M32-73
- 74.—Brockville, peat bog, Leeds county, Ontario; map, by A. Anrep. 1910. 1000' : 1".
 Accompanying report No. 71.
 Out of print. Cat. No. M32-74
- 75.—Rondeau peat bog, Kent county, Ontario; map, by A. Anrep. 1910. 1056' : 1".
 Accompanying report No. 71.
 Out of print. Cat. No. M32-75
- 76.—Alfred peat bog, Prescott county, Ontario; map of government peat bog, by A. Anrep. 1910. 440' : 1".
 Accompanying report No. 71.
 Out of print. Cat. No. M32-76
- 77.—Profile of main ditch, Government peat bog, Alfred, Ontario; map, by A. Anrep. 1910.
 Accompanying report No. 71.
 Out of print. Cat. No. M32-77
- 78.—Asbestos region, Quebec; map, by Fritz Cirkel. 1910. 1m : 1".
 Accompanying report No. 69.
 Out of print. Cat. No. M32-78
- 79.—The production of iron and steel in Canada during the calendar year 1909, by John McLeish. 1910. 35p. Tables.
 Advance Chapter of report No. 88.
 Out of print. Cat. No. M32-79
- 80.—The production of coal and coke in Canada during the calendar year 1909, by John McLeish. 1910. 36p. Tables.
 Advance chapter of report No. 88.
 15c. Cat. No. M32-80

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—*Continued—Suite.*

- 81.—**Amiante-chrysotile; gisements, exploitation, ateliers de préparation et usages**, par Fritz Cirkel. 2^e édition. 1911. 321p. 66 planches, 88 figures, 2 cartes.

Appendice.—*De l'essai de substances isolatrices de la chaleur*, par Frédéric Bacon.

See report No. 69 for English edition.

Édition épuisée.

N^o de cat. M32-81F

- 82.—**Magnetic concentration experiments** with: iron ores of the Bristol Mines, Que.; iron ores of the Bathurst Mines, N.B.; a copper nickel ore from Nairn, Ontario, by George C. Mackenzie. 1910. 28p. 4 figs., tables. (Bulletin No. 5.)

Out of print.

Cat. No. M32-82

- 83.—**An investigation of the coals of Canada with reference to their economic qualities**, as conducted at McGill University under the authority of the Dominion Government, by J. B. Porter, R. J. Durley and others. 1912. 6 volumes.

Short title: **Coals of Canada: an economic investigation.**

See also report No. 338, volume 7. Voir le rapport n^o 308 pour l'édition française.

CONTENTS

- Vol. 1.—**Report, part 1 to 6.** 243p. 46 pls., 31 figs., tables, 5 maps.

See maps No. 95, 96, 97, 98, and 99.

75c.

Cat. No. M32-83/1

- Vol. 2.—**Report, part 7 to 9.** 189p. 17 pls., 25 figs., tables.

75c.

Cat. No. M32-83/2

- Vol. 3.—**Appendix 1: Detailed results of the coal washing trials**, by J. B. Porter. 168p. Tables, graphs.

Out of print.

Cat. No. M32-83/3

- Vol. 4.—**Appendix 2: Detailed results of the boiler trials**, by R. J. Durley. 352p. Tables, graphs.

Out of print.

Cat. No. M32-83/4

- Vol. 5.—**Appendix 3: Detailed results of the gas producer trials**, by R. J. Durley. 318p. Tables, graphs.

Out of print.

Cat. No. M32-83/5

- Vol. 6.—**Appendix 4: Manufacture and testing of coke**, by J. B. Porter and E. Stansfield. **Appendix 5: Work of the chemical laboratory**, by Edgar Stansfield. 120p. 3 pls., 6 figs., tables.

Out of print.

Cat. No. M32-83/6

Separate parts of volume 1

- Vol. 1, part 1.—**Introductory**, by J. B. Porter. 18p.

35c.

Cat. No. M32-83/11

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Reports and maps—Rapports.—*Continued—Suite.*

Vol. 1, part 2.—**The coal fields of Canada**, by T. C. Denis. Pp. 21-126. 27 pls., tables.
35c.

Cat. No. M32-83/12

Vol. 1, part 3.—**Collecting the coal samples**, by T. C. Denis and E. Stansfield. Pp. 129-153.
35c.

Cat. No. M32-83/13

Vol. 1, part 4.—**Sampling in the testing plant and laboratory**, by J. B. Porter. Pp. 157-160. 3 pls., 1 figure.
35c.

Cat. No. M32-83/14

Vol. 1, part 5.—**Mechanical purification of coal: commonly called coal washing**, by J. B. Porter. Pp. 163-200. 15 pls., 28 figs., tables.
35c.

Cat. No. M32-83/15

Vol. 1, part 6.—**Manufacture and testing of coke**, by E. Stansfield and J. B. Porter. Pp. 205-233. 3 figs., tables.
35c.

Cat. No. M32-83/16

Separate parts of volume 2

Vol. 2, part 7.—**Boiler tests**, by R. J. Durley. 51p. 1 pl., 6 figs., tables.
35c.

Cat. No. M32-83/27

Vol. 2, part 8.—**Gas producer tests**, by R. J. Durley. Pp. 55-118. 5 pls., 12 figs., tables.
35c.

Cat. No. M32-83/28

Vol. 2, part 9.—**Work of the chemical laboratory**, by Edgar Stansfield. Pp. 121-184. 11 pls., 7 figs., tables.
35c.

Cat. No. M32-83/29

84.—**Report on the gypsum deposits of the Maritime Provinces**, by W. F. Jennison. 1911. 171p. 36 pls., 19 figs., 3 maps.

Voir le rapport n^o 233 pour l'édition française. See also reports No. 245 and 714 and maps No. 64, 65, and 66.

Out of print.

Cat. No. M32-84

85.—**The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1909**, by John McLeish. Ottawa, 1910. 47p. Tables.

Advance chapter of report No. 88.

30c.

Cat. No. M32-85

86.—**General distribution of serpentine in the Eastern Townships, Quebec; map**, by Fritz Cirkel. 1910. 20m : 1".

Accompanying report No. 69.

Out of print.

Cat. No. M32-86

87.—Not published.

88.—**Annual report on the mineral production of Canada during the calendar year 1909**, by John McLeish. 1911. 291p. Tables.

Out of print.

Cat. No. M32-88

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Reports and maps—Rapports.—Continued—Suite.

- 89.—**Proceedings of Conference on proposed legislation to regulate the manufacture, importation, and testing of explosives**, held in Ottawa, Sept. 23 and 30, 1910. Reprint, 1911. 49p.
15c. *Cat. No. M32-89*
- 90.—**The exploitation of our peat bogs for the production of fuel for domestic and industrial purposes**, by Eugene Haanel. 1910. 8p. (Reprint of presidential address delivered at the fourth annual meeting of the American Peat Society, held at Ottawa, July 25, 1910.)
Out of print. *Cat. No. M32-90*
- 91.—Not published.
- 92.—**Report on the explosives industry in the Dominion of Canada**, by Arthur Desborough. 2nd edition. 1911. 16p.
15c. *Cat. No. M32-92*
- 93.—**Report on the molybdenum ores of Canada**, by T. L. Walker. 1911. 64p. 14 pls., 10 figs.
Voir le rapport n^o 197 pour l'édition française.
Out of print. *Cat. No. M32-93*
- 94.—**Cobalt, Gowganda, Shiningtree and Porcupine districts, Temiscaming county, Ontario; map**, by L. H. Cole. 1911. 7m : 1".
Accompanying report No. 103.
Out of print. *Cat. No. M32-94*
- 95.—**General map of Canada, showing coal and lignite fields**, by J. B. Porter. 1911. 100m : 1".
Accompanying report No. 83, Vol. I.
Out of print. *Cat. No. M32-95*
- 96.—**Coal fields of Nova Scotia and New Brunswick; general map**, by J. B. Porter. 1911. 12m : 1".
Accompanying report No. 83, Vol. I. See also map No. 434.
Out of print. *Cat. No. M32-96*
- 97.—**Coal fields in Alberta, Saskatchewan, and Manitoba; general map**, by D. B. Dowling. 1911. 35m : 1".
Accompanying report No. 83, Vol. I.
Out of print. *Cat. No. M32-97*
- 98.—**Coal fields in British Columbia; general map**, by J. B. Porter. 1911. 35m : 1".
Accompanying report No. 83, Vol. I.
Out of print. *Cat. No. M32-98*
- 99.—**Coal fields in Yukon Territory; general map**, by J. B. Porter. 1911. 32m : 1".
Accompanying report No. 83, Vol. I.
Out of print. *Cat. No. M32-99*

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Reports and maps—Rapports.—*Continued—Suite.*

- 100.—**Report on the building and ornamental stones of Canada; Vol. I; Ontario**, by W. A. Parks. 1912. 376p. 77 pls., 21 figs., tables.

Contents.—PART I: *Introduction containing general information with regard to the quarrying, testing and handling of stones.*—PART II: *Systematic description of the building and ornamental stones of Ontario.*

Voir le rapport n^o 100A pour l'édition française. See also reports No. 203, 279, 388 and 452.

Out of print.

Cat. No. M32-100

- 100A.—**Rapport sur les pierres de construction et d'ornement du Canada; Vol. I; Ontario**, par W. A. Parks. 1912. 437p. 77 planches, 21 figures, tableaux.

Sommaire.—PARTIE I: *Introduction contenant des renseignements généraux sur l'exploitation, l'essai et la manutention des pierres.*—PARTIE II: *Description systématique des pierres de construction et d'ornement de l'Ontario.*

See report No. 100 for English edition. Voir aussi rapports n^{os} 280, 389.

Édition épuisée.

N^o de cat. M32-100F

- 101.—Not published.

- 102.—**Preliminary report on the mineral production of Canada during the calendar year 1910**, by John McLeish. 1911. 21p. Tables.

Part of report No. 103.

Out of print.

Cat. No. M32-102

- 103.—**Summary report of the Mines Branch of the Department of Mines for the calendar year 1910**. 1911. 243p. 16 pls., 1 fig., tables, 1 map. (Sess. paper No. 26a-1911.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—REPORTS: *Chemical Laboratories*, by F. G. Wait; *Statistical Division*, by John McLeish; *Assay Office*, by G. Middleton; *Fuel Testing Station*, by B. F. Haanel; *Metallurgical Laboratory*, by G. C. Mackenzie.—PRELIMINARY REPORTS ON FIELD WORK: *Molybdenum ores of Ontario and British Columbia*, by T. L. Walker; *Copper mining industry in Ontario and Maritime Provinces*, by Alfred W. G. Wilson; *The Austin-Brook iron-bearing district, New Brunswick*, by E. Lindeman; *Iron ore deposits at Torbrook, Annapolis Co., N.S., and, Magnesite deposits, township of Grenville, Argenteuil Co., Que.*, by Howells Fréchette; *Tin-ore, in the vicinity of Arnprior, Ont.*, *Cobalt-silver district, Gowganda and Elk Lake silver district, Shiningtree and Rosey Creek Silver district, Porcupine gold district*, by L. H. S. Cole; *Mica deposits of Ontario and Quebec*, by Hugh S. de Schmidt; *Building and ornamental stones of Ontario; south of the Ottawa and French rivers*, by Prof. W. A. Parks; *Peat bogs of Canada, and manufacture of peat fuel at the Government peat plant, Alfred, Ont.*, by A. Anrep; *Tests of Blaugas*, by Edgar Stansfield; *Explosives industry in the Dominion of Canada*, by Capt. Arthur Desborough; *Explosives factories of Canada, and on the collection of data relating to mining operations, Explosion of "Virite" at Hull, Que.*, *Explosion of "Blasters' Friend" at Sand Point, near Arnprior, Ont.*, *coal mine disaster at Bellevue mine, near Frank, Alta.*, by J. G. S. Hudson.—APPENDICES: *Mineral production of Canada for 1910 (see report No. 102); Conference on proposed legislation to regulate the manufacture, importation, and testing of explosives; Bill 79, The Explosives Act, 1910-11.*

Voir le rapport n^o 103A pour l'édition française. See map No. 94.

Out of print.

Cat. No. M32-103

- 103A.—**Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile 1910**. 1912. 239p. 16 planches, 1 figure, 1 carte. (Doc. parl. n^o 26a-1911.)

Sommaire.—RAPPORT GÉNÉRAL DU DIRECTEUR, par Eugène Haanel.—RAPPORTS: *Laboratoires de chimie*, par F. G. Wait; *Division des richesses et statistiques*

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minières, par John McLeish; Essayerie de la Puissance du Canada, par G. Middleton; Station d'essai de combustible, par B. F. Haanel; Laboratoire de métallurgie et de préparation de minerai, par C. Mackenzie.—RAPPORTS PRELIMINAIRES DES TRAVAUX SUR LE TERRAIN: *Minerai de molybdène d'Ontario et Colombie-Britannique, par T. L. Walker; Industrie de l'extraction du cuivre dans l'Ontario et les Provinces maritimes, par Alfred W. G. Wilson; District ferrifère d'Austin Brook, N.-B., par E. Lindeman; Investigation sur les gisements de minerai de Torbrook, comté d'Annapolis, Nouvelle-Écosse, et les gisements de magnésite, canton de Grenville, comté d'Argenteuil, Qué., par Howells Fréchette; Investigation sur une prétendue découverte de minerai d'étain dans le voisinage d'Arnprior, Ont., District argentifère de Cobalt, de Gowganda et Elk Lake, de Shiningtree et Rosey Creek, de Porcupine, par L. H. Cole; Gisements de mica d'Ontario et Québec, par Hugh S. de Schmid; Pierres de construction et d'ornement d'Ontario, au sud de la rivière Ottawa et de la rivière au Français, par W. A. Parks; Tourbières du Canada et la fabrication de la tourbe combustible à la fabrique de tourbe du gouvernement à Alfred, Ont., par A. Anrep; Essais de Blaugas, par Edgar Stansfield; Industrie des explosifs en Canada, par Arthur Desborough; Fabriques d'explosifs du Canada et de la réunion de données relatives aux opérations minières, Explosion de virite à Hull, Qué., Explosion de "Blaster's Friend" à Sand Point, près d'Arnprior, Ont., Catastrophe de la mine de houille de Bellevue, près de Frank, Alta., par J. G. S. Hudson.*—**Annexes:** *Production minérale du Canada en 1910, par John McLeish; Conférence sur la législation projetée pour réglementer la fabrication, l'importation et l'essai des explosifs, par Eugène Haanel; Bill 79, Loi des explosifs, 1910-11.*
See report No. 103 for English edition.

Édition épuisée.

N^o de cat. M32-103F

- 104.—**Catalogue of publications of the Mines Branch, 1907-11**, containing tables of contents of the various technical reports, monographs, bulletins, etc., together with a list of magnetometric survey maps, working plans, etc.; including also a digest of technical memoirs and the annual summary of reports of the Superintendent of Mines issued by the Department of the Interior, 1902-1906. 1912. 135p.

Out of print.

Cat. No. M32-104

- 105.—**Austin Brook iron-bearing district, New Brunswick**, by Einar Lindeman. Ottawa, 1913. 15p. 3 pls., 5 figs., 3 maps in pocket. Voir le rapport n^o 219 pour l'édition française. See maps No. 106, 107, and 108. 25c.

Cat. No. M32-105

- 106.—**Austin Brook iron-bearing district, Bathurst township, Gloucester county, N.B.; geological map**, by E. Lindeman. 1912. 400' : 1".

Accompanying reports No. 105 and 217, Vol. I.

35c.

Cat. No. M32-106

- 107.—**Austin Brook iron-bearing district, Gloucester county, N.B., magnetometric survey map, vertical intensity**, by E. Lindeman. 1912. 400' : 1".

Accompanying reports No. 105 and 217, Vol. I.

35c.

Cat. No. M32-107

- 108.—**Index map showing iron-bearing area at Austin Brook**, by E. Lindeman. 1911. 400' : 1".

Accompanying report No. 105.

Out of print.

Cat. No. M32-108

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

109.—Not published.

110.—**Western portion of Torbrook iron ore deposits**, Annapolis county, N.S., by Howells Fréchette. 1912. 20p. 4 pls., 1 map. (Bulletin No. 7.)

See map No. 141.

15c.

Cat. No. M32-110

111.—**Diamond drilling at Point Mamainse, Ontario**, by Alfred C. Lane, with introductory by A. W. G. Wilson. 1911. 59p. 5 pls., 1 fig., 1 map. (Bulletin No. 6.)

See map No. 112.

Out of print.

Cat. No. M32-111

112.—**Sketch plan showing geology of Point Mamainse, Ont.**, by Professor A. C. Lane. 1912. 4,000' : 1".

Accompanying report No. 111.

Out of print.

Cat. No. M32-112

113.—**Holland peat bog, Ontario; map**, by A. Anrep. 1912. 1600' : 1".

Accompanying report No. 151.

Out of print.

Cat. No. M32-113

114.—**The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1910**, by John McLeish. 1911. 60p. Tables.

Advance chapter of report No. 143.

Out of print.

Cat. No. M32-114

115.—**The production of iron and steel in Canada during the calendar year 1910**, by John McLeish. 1911. 38p. Tables.

Advance chapter of report No. 143.

Out of print.

Cat. No. M32-115

116.—**The production of coal and coke in Canada during the calendar year 1910**, by John McLeish. 1911. 31p. Tables.

Advance chapter of report No. 143.

Out of print.

Cat. No. M32-116

117.—**General summary of the mineral production of Canada during the calendar year 1910**, by John McLeish. 1911. 37p. Tables.

Part of report No. 143.

Out of print.

Cat. No. M32-117

118.—**Mica: its occurrence, exploitation, and uses**, by H. S. de Schmid. Second edition. 1912. 411p. 38 pls., 67 figs., 22 maps.

Voir le rapport n° 264 pour l'édition française. See also report No. 701.

See maps No. 119 to 140 inclusive.

Out of print.

Cat. No. M32-118

119.—**Mica mines and occurrences in townships of East and West Portland, Quebec; map**, by H. S. de Schmid. 1912. 2m : 1".

Accompanying report No. 118.

Out of print.

Cat. No. M32-119

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- 120.—Mica mines and occurrences in township of Derry, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-120*
- 121.—Mica mines and occurrences in township of Villeneuve, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-121*
- 122.—Mica mines and occurrences in townships of Bigelow and Wells, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-122*
- 123.—Mica mines and occurrences in township of Templeton, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-123*
- 124.—Mica mines and occurrences in township of Wakefield, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-124*
- 125.—Mica mines and occurrences in township of Hull, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-125*
- 126.—Mica mines and occurrences in townships of Aylwin and Hincks, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-126*
- 127.—Mica mines and occurrences in township of Blake, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-127*
- 128.—Mica mines and occurrences in townships of Wright and Northfield, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-128*
- 129.—Mica mines and occurrences in township of Alleyn, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-129*
- 130.—Mica mines and occurrences in township of Cawood, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-130*

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Reports and maps—Rapports.—*Continued—Suite.*

- 131.—Mica mines and occurrences in township of Loughborough, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-131*
- 132.—Mica mines and occurrences in township of Bedford, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-132*
- 133.—Mica mines and occurrences in townships of North and South Burgess, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-133*
- 134.—Mica mines and occurrences in townships of Oso and Sherbrooke South, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-134*
- 135.—Mica mines and occurrences in township of North Crosby, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-135*
- 136.—Mica mines and occurrences in township of South Crosby, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-136*
- 137.—Mica mines and occurrences in township of Bastard, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-137*
- 138.—Map showing location of principal mines and occurrences in the Quebec mica area, by Hugh S. de Schmid. 1911. 3.95m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-138*
- 139.—Map showing location of principal mines and occurrences in the Ontario mica area, by Hugh S. de Schmid. 1911. 3.95m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-139*
- 140.—Map showing distribution of the principal mica occurrences in the Dominion of Canada, by Hugh S. de Schmid. 1911. 100m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-140*
- 141.—Torbrook iron-bearing district (southwest part), Annapolis county, N.S.; topographic map, by Howells Fréchette. 1912. 400' : 1".
Accompanying report No. 110.
35c. *Cat. No. M32-141*

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Reports and maps—Rapports.—Continued—Suite.

- 142.—**Summary report of the Mines Branch of the Department of Mines for the calendar year 1911.** 1912. 208p. 16 pls., 6 figs., 1 map. (Sess. paper No. 26a-1912.)

Contents.—DIRECTOR'S GENERAL REPORT, by *Eugene Haanel*.—REPORTS: *Chemical laboratories*, by *F. G. Wait*; *Division of Mineral Resources and Statistics*, by *John McLeish*; *Assay Office*, by *G. Middleton*; *Fuels and Fuel Testing Division*, by *B. F. Haanel*; *Investigation of peat bogs, 1911*, by *A. Anrep*; *Chemical laboratory of Fuel Testing Station*, by *E. Stansfield*; *Ore Dressing and Metallurgical Laboratory*, by *G. C. Mackenzie*.—PRELIMINARY REPORTS ON FIELD WORK: *Building and ornamental stones of Maritime Provinces*, by *W. A. Parks*; *Sudbury nickel field*, by *A. P. Coleman*; *Copper and pyrites*, by *A. W. G. Wilson*; *Iron ore deposits along Central Ontario railway*, by *E. Lindeman*; *Calabogie iron-bearing district*, by *E. Lindeman*; *Magnetometric survey of a nickeliferous pyrrhotite deposit in Sudbury district*, by *E. Lindeman*; *Canadian market for various mineral products in a crude or partially prepared state*, by *Howells Fréchette*; *Gypsum and salt industries of central and western Canada*, by *L. H. Cole*; *Phosphate and feldspar deposits of Ontario and Quebec*, by *Hugh S. de Schmid*; *Determination of moisture in fuels*, by *E. Stansfield*; *Tests on pyrene*, by *E. Stansfield*; *An electrically heated tube furnace suitable for making ultimate organic analyses*, by *E. Stansfield*; *Explosion of explosives at Sand Point, Ont., Beloeil and Rigaud, Qué.*, by *J. G. S. Hudson*.—**Appendices:** *Preliminary report on mineral production, 1911 (See report No. 150); On Explosives*

Voir le rapport n^o 142A pour l'édition française. See map No. 166.

Out of print.

Cat. No. M32-142

- 142A.—**Rapport sommaire de la Division des mines du ministère des Mines pour l'année 1911.** 1913. 200p. 16 planches, 6 figures, 1 carte. (Doc. parl. n^o 26a-1912.)

Sommaire.—RAPPORT GÉNÉRAL DU DIRECTEUR, par *Eugene Haanel*.—RAPPORTS: *Laboratoire de chimie*, par *F. G. Wait*; *Section des statistiques et des ressources minérales*, par *John McLeish*; *Laboratoire fédéral de Vancouver, C.-B.*, par *G. Middleton*; *Section des combustibles et de l'essai des combustibles*, par *B. F. Haanel*; *Recherche sur les tourbières*, par *A. Anrep*; *Laboratoire de chimie*, par *Edgar Stansfield*; *Laboratoire métallurgique*, par *Geo. C. Mackenzie*.—RAPPORTS PRELIMINAIRES DES TRAVAUX SUR LE TERRAIN: *Pierre à bâtir des provinces maritimes*, par *W. A. Parks*; *L'industrie du nickel avec indications spéciales sur la région de Sudbury*, par *A. P. Coleman*; *Cuivre et pyrites*, par *A. W. G. Wilson*; *Les dépôts de fer le long du "Central Ontario Railway"*; *Gisements de fer du district de Calabogie*; *Relevé magnétométrique de la pyrrhotite nickelifère du district de Sudbury*, par *E. Lindeman*; *Étude des débouchés canadiens pour les produits minéraux bruts et en partie manufacturés*, par *Howells Fréchette*; *Les industries du gypse et du sel dans le Canada central et méridional*, par *L. H. S. Code*; *Les dépôts de phosphate et de feldspath de l'Ontario et de la province de Québec*, par *Hugh S. de Schmid*; *Détermination de l'humidité des combustibles*, par *Edgar Stansfield*; *Description d'un four électrique pour faire les analyses organiques élémentaires*, par *Edgar Stansfield*; *Rapport sur l'explosion d'un explosif à Sand Point, Ont., à Belœil, Qué., à Rigaud, Qué.*, par *J. G. S. Hudson*.—**Appendices:** *Rapport préliminaire sur la production minérale du Canada, 1911*, par *John McLeish*; *Explosifs*. See report No. 142 for English edition.

Édition épuisée.

N^o de cat. M32-142F

- 143.—**Annual report on the mineral production of Canada during the calendar year 1910**, by *John McLeish*. 1912. 328p. Tables.

See separates No. 114, 115, 116, and 117.

Out of print.

Cat. No. M32-143

- 144.—Not published.

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Reports and maps—Rapports.—*Continued—Suite.*

- 145.—**Magnetic iron sands of Natashkwan**, Saguenay county, Quebec, by Geo. C. Mackenzie. 1912. 49p. 22 pls., 9 figs., 3 maps.
Voir le rapport n^o 149 pour l'édition française. See maps No. 146, 147, and 148.
Out of print. *Cat. No. M32-145*
- 146.—**Distribution of iron ore sands deposits on the north shore of the river and gulf of St. Lawrence, Canada; map**, by Geo. C. Mackenzie. 1912. 100m : 1".
Accompanying report No. 145.
Out of print. *Cat. No. M32-146*
- 147.—**Magnetic iron sand deposits in relation to Natashkwan Harbour and Great Natashkwan river, Que.; index map**, by Geo. C. Mackenzie. 1912. ½m : 1".
Accompanying report No. 145.
Out of print. *Cat. No. M32-147*
- 148.—**Natashkwan magnetic iron sand deposits**, Saguenay county, Que.; **map**, by Geo. C. Mackenzie. 1912. 1,000' : 1".
Accompanying report No. 145.
Out of print. *Cat. No. M32-148*
- 149.—**Sables ferrugineux magnétiques de Natashkwan**, comté de Saguenay, province de Québec, par Geo. C. Mackenzie. 1913. 49p. 22 gravures, 9 figures, tableaux, 3 cartes.
See report No. 145 for English edition.
Édition épuisée. *N^o de cat. M32-149F*
- 150.—**Preliminary report on the mineral production of Canada during the calendar year 1911**, by John McLeish. 1912. 24p. Tables.
Part of report No. 142.
Out of print. *Cat. No. M32-150*
- 151.—**Investigation of the peat bogs and peat industry of Canada, 1910-11**, by A. Anrep. 1912. 61p. 19 pls., 1 fig., 12 maps. (Bulletin No. 8.)
Voir le n^o 180 pour l'édition française. See maps No. 113, 152, 153, 157 to 165 inclusive.
Out of print. *Cat. No. M32-151*
- 152.—**Location of peat bogs investigated in Ontario; index map**, by A. Anrep. 1912. 35m : 1".
Accompanying report No. 151. See map No. 447.
Out of print. *Cat. No. M32-152*
- 153.—**Location of peat bogs**, as investigated in Manitoba; **index map**, by A. Anrep. 1912. 12m : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-153*
- 154.—**Report on the utilization of peat fuel for the production of power**, being a record of experiments conducted at the Fuel Testing Station, Ottawa, 1910-1911, by B. F. Haanel. 1912. 145p. 10 pls., 17 figs., 17 charts, tables.
Voir le n^o 155 pour l'édition française.
Out of print. *Cat. No. M32-154*

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Reports and maps—Rapports—Continued—Suite.

- 155.—**Rapport sur l'utilisation de la tourbe pour la production de la force motrice**; résultats des expériences faites à la Station d'essai des combustibles à Ottawa, 1910-1911, par B. F. Haanel. 1913. 141p. 10 planches, 17 figures, 17 diagrammes, tableaux.
See report No. 154 for English edition.
Édition épuisée. *N^o de cat. M32-155F*
- 156.—**Rapport sur les minerais de tungstène du Canada**, par T. L. Walker. 1913. 56p. 10 planches, 6 figures, tableaux.
See report No. 25 for English edition.
Édition épuisée. *N^o de cat. M32-156F*
- 157.—**Lac-du-Bonnet peat bog, Manitoba; map**, by A. Anrep. 1912. 800' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-157*
- 158.—**Transmission peat-bog, Manitoba; map**, by A. Anrep. 1912. 1500' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-158*
- 159.—**Corduroy peat bog, Manitoba; map**, by A. Anrep. 1912. 780' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-159*
- 160.—**Boggy Creek peat bog, Manitoba; map**, by A. Anrep. 1912. 1300' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-160*
- 161.—**Rice Lake peat bog, Manitoba; map**, by A. Anrep. 1912. 820' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-161*
- 162.—**Mud Lake peat bog, Manitoba; map**, by A. Anrep. 1912. 750' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-162*
- 163.—**Litter peat bog, Manitoba; map**, by A. Anrep. 1912. 800' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-163*
- 164.—**Julius peat litter bog, Manitoba; map**, by A. Anrep. 1912. 2350' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-164*
- 165.—**Fort Francis peat bog, Ontario; map**, by A. Anrep. 1912. 1900' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-165*

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Reports and maps—Rapports.—*Continued—Suite.*

- 166.—**McKim township**, Sudbury district, Ont.; magnetometric map of No. 3 mine, lot 7, concessions V and VI, by E. Lindeman. 1912. 200' : 1".

Accompanying report No. 142.

Out of print.

Cat. No. M32-166

- 167.—**Pyrites in Canada: its occurrence, exploitation, dressing, and uses**, by Alfred W. G. Wilson. 1912. 202p. 27 pls., 29 figs., tables, 1 map.

Voir le rapport n^o 169 pour l'édition française. See map No. 168.

Out of print.

Cat. No. M32-167

- 168.—**Pyrites mines and prospects in eastern Canada** and their relation to the United States market; general map, by A. W. G. Wilson. 1912. 125m : 1".

Accompanying report No. 167.

Out of print.

Cat. No. M32-168

- 169.—**Pyrites au Canada: gisements, exploitation, préparation, usages**, par Alfred W. G. Wilson. 1914. 204p. 27 planches, 29 figures, tableaux, 1 carte.

See report No. 167 for English edition.

Édition épuisée.

N^o de cat. M32-169F

- 170.—**The nickel industry**; with special reference to the Sudbury region, Ontario, by A. P. Coleman. 1913. 206p. 63 pls., 14 figs., 8 maps.

Voir le rapport n^o 179 pour l'édition française. See maps No. 171, 172, 173, 174, 175, 176, 177, and 178.

Out of print.

Cat. No. M32-170

- 171.—**Sudbury nickel region, Ont.; geological map**, by A. P. Coleman. 1912. 1m : 1".

Accompanying report No. 170.

Out of print.

Cat. No. M32-171

- 172.—**Victoria mine; geological map**, by A. P. Coleman. 1912. 300' : 1".

Accompanying report No. 170.

Out of print.

Cat. No. M32-172

- 173.—**Crean Hill mine; geological map**, by A. P. Coleman. 1912. 225' : 1".

Accompanying report No. 170.

Out of print.

Cat. No. M32-173

- 174.—**Creighton mine; geological map**, by A. P. Coleman. 1912. 300' : 1".

Accompanying report No. 170.

Out of print.

Cat. No. M32-174

- 175.—**Contact of Norite and Laurentian in vicinity of Creighton mine; geological map**, by A. P. Coleman. 1913. 700' : 1".

Accompanying report No. 170.

Out of print.

Cat. No. M32-175

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Reports and maps—Rapports.—*Continued—Suite.*

- 176.—**Copper Cliff offset; geological map**, by A. P. Coleman. 1913. 2800' : 1".
Accompanying report No. 170.
Out of print. *Cat. No. M32-176*
- 177.—**No. 3 Mine (Frood mine), Sudbury district; geological map**, by A. P. Coleman. 1912. 550' : 1".
Accompanying report No. 170.
Out of print. *Cat. No. M32-177*
- 178.—**Vicinity of Stobie and No. 3 mines; geological map**, by A. P. Coleman. 1912. 1400' : 1".
Accompanying report No. 170.
Out of print. *Cat. No. M32-178*
- 179.—**L'industrie du nickel particulièrement dans la région de Sudbury, Ontario**, par A. P. Coleman. 1915. 212p., 64 planches, 14 figures, 8 cartes.
See report No. 170 for English edition.
Édition épuisée. *N° de cat. M32-179F*
- 180.—**Recherches sur les fourbières et l'industrie de la tourbe au Canada, 1910-11**, par A. Anrep. 1914. 50p. 19 planches, 1 figure, 12 cartes. (Bulletin n° 8.)
See report No. 151 for English edition.
Édition épuisée. *N° de cat. M32-180F*
- 181.—**The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1911**, by John McLeish. 1912. 55p. Tables.
Advance chapter of report No. 201.
Out of print. *Cat. No. M32-181*
- 182.—**The production of iron and steel in Canada during the calendar year 1911**, by John McLeish. 1912. 32p. Tables.
Advance chapter of report No. 201.
Out of print. *Cat. No. M32-182*
- 183.—**General summary of the mineral production of Canada during the calendar year 1911**, by John McLeish. 1912. 38p. Tables.
Part of report No. 201.
Out of print. *Cat. No. M32-183*
- 184.—**Magnetite occurrences along the Central Ontario Railway**, by E. Lindeman. 1913. 23p. 9 pls., 19 maps.
Voir le rapport n° 195 pour l'édition française. See maps No. 185 to 194, inclusive, and 204.
75c. *Cat. No. M32-184*
- 185.—**Blairton iron mine, Belmont township, Peterborough county, Ontario; magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol I.
35c. *Cat. No. M32-185*

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Reports and maps—Rapports.—*Continued—Suite.*

- 185A.—**Blairton iron mine**, Belmont township, Peterborough county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
35c. *Cat. No. M32-185A*
- 186.—**Belmont iron mine**, Belmont township, Peterborough county, Ontario; **magnetometric survey map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
35c. *Cat. No. M32-186*
- 186A.—**Belmont iron mine**, Belmont township, Peterborough county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
35c. *Cat. No. M32-186A*
- 187.—**St. Charles mine**, Tudor township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
35c. *Cat. No. M32-187*
- 187A.—**St. Charles mine**, Tudor township, Hastings county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
35c. *Cat. No. M32-187A*
- 188.—**Baker mine**, Tudor township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
35c. *Cat. No. M32-188*
- 188A.—**Baker mine**, Tudor township, Hastings county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
35c. *Cat. No. M32-188A*
- 189.—**Ridge iron ore deposits**, Wollaston township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
35c. *Cat. No. M32-189*
- 190.—**Coehill and Jenkins mines**, Wollaston township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
35c. *Cat. No. M32-190*
- 190A.—**Coehill and Jenkins mines**, Wollaston township, Hastings county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
35c. *Cat. No. M32-190A*

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- 191.—**Bessemer iron ore deposits**, Mayo township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
35c. *Cat. No. M32-191*
- 191A.—**Bessemer iron ore deposits**, Mayo township, Hastings county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
35c. *Cat. No. M32-191A*
- 192.—**Rankin, Childs, and Stevens mines**, Mayo township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
35c. *Cat. No. M32-192*
- 192A.—**Rankin, Childs, and Stevens mines**, Mayo township, Hastings county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
35c. *Cat. No. M32-192A*
- 193.—**Kennedy property**, Carlow township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
35c. *Cat. No. M32-193*
- 193A.—**Kennedy property**, Carlow township, Hastings county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
35c. *Cat. No. M32-193A*
- 194.—**Bow Lake iron ore occurrences**, Faraday township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
35c. *Cat. No. M32-194*
- 195.—**Gisements de magnétite le long de la ligne du Central Ontario Railway**, par E. Lindeman. 1914. 24p. 9 planches, tableaux, 19 cartes.
See report No. 184 for English edition.
Édition épuisée. *Nº de cat. M32-195F*
- 196.—**Enquête sur les tourbières et l'industrie de la tourbe au Canada**, durant la saison 1909-10, par A. Anrep. 1913. 48p. 17 planches, 6 figures, 6 cartes. (Bulletin n^o 4.)
See report No. 71 for English edition.
Édition épuisée. *Nº de cat. M32-196F*
- 197.—**Rapport sur les minerais de molybdène du Canada**, par T. L. Walker. 1912. 71p. 14 planches, 10 figures.
See report No. 93 for English edition.
Édition épuisée. *Nº de cat. M32-197F*

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Reports and maps—Rapports.—*Continued—Suite.*

- 198.—**Tourbe et lignite: leur fabrication et leurs emplois en Europe**, par E. Nystrom. 1913. 265p. 34 planches, 228 figures.
See report No. 19 for English edition.
Édition épuisée. *N° de cat. M32-198F*
- 199.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1911**, by Cosmo T. Cartwright. 1913. 85p. Tables.
Advance chapter of report No. 201.
Out of print. *Cat. No. M32-199*
- 200.—**The production of coal and coke in Canada during the calendar year 1911**, by John McLeish. 1912. 35p. Tables.
Advance chapter of report No. 201.
15c. *Cat. No. M32-200*
- 201.—**Annual report on the mineral production of Canada during the calendar year 1911**, by John McLeish. 1913. 316p. Tables.
Voir le rapport n° 265 pour l'édition française. See separates No. 181, 182, 183, 199, and 200.
Out of print. *Cat. No. M32-201*
- 202.—**Graphite: propriétés, gisements, traitements et usages**, par Fritz Cirkel. 1912. 263p. 20 planches, 52 figures, tableaux, 10 cartes.
See report No. 18 for English edition.
Édition épuisée. *N° de cat. M32-202F*
- 203.—**Report on the building and ornamental stones of Canada; Vol. II: Maritime Provinces**, by Wm. A. Parks. 1914. 264p. 45 pls., 9 figs.
Voir le rapport n° 280 pour l'édition française. See also reports No. 100, 279, 388, and 452.
75c. *Cat. No. M32-203*
- 204.—**Magnetite occurrences along the Central Ontario Railway; index map**, by E. Lindeman. 1911. 4m : 1".
Accompanying report No. 184.
Out of print. *Cat. No. M32-204*
- 205.—**Moose Mountain iron-bearing district, deposits No. 1 to 7 incl., Sudbury district, Ontario; magnetometric map**, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
Out of print. *Cat. No. M32-205*
- 205A.—**Moose Mountain iron-bearing district, deposits No. 1 to 7 incl., Sudbury district, Ontario; geological map**, by E. Lindeman. 1912. 800' : 1".
Accompanying report No. 303.
35c. *Cat. No. M32-205A*
- 206.—**Moose Mountain iron-bearing district, Northern portion deposit No. 2, Sudbury district, Ontario; magnetometric survey map**, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
35c. *Cat. No. M32-206*

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- 207.—**Moose Mountain iron-bearing district**, deposits No. 8, 9, and 9a, Sudbury district, Ontario; **magnetometric survey map**, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
Out of print. *Cat. No. M32-207*
- 208.—**Moose Mountain iron-bearing district**, deposit No. 10, Sudbury district, Ontario; **magnetometric survey map**, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
35c. *Cat. No. M32-208*
- 208A.—**Moose Mountain iron-bearing district**, Eastern portion deposit No. 11, Sudbury district, Ontario; **magnetometric survey map**, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
35c. *Cat. No. M32-208A*
- 208B.—**Moose Mountain iron-bearing district**, Western portion deposit No. 11, Sudbury district, Ontario; **magnetometric survey map**, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
35c. *Cat. No. M32-208B*
- 208C.—**Moose Mountain iron-bearing district**, Sudbury district, Ontario; **general geological map**, by E. Lindeman. 1912. 800' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
35c. *Cat. No. M32-208C*
- 209.—**The copper smelting industries of Canada**, by Alfred W. G. Wilson. 1913. 184p. 43 pls., 39 figs., 4 maps.
Voir le rapport n^o 214 pour l'édition française. See maps No. 210, 211, 212, and 213.
Out of print. *Cat. No. M32-209*
- 210.—**Location of copper smelters in Canada; map**, by Alfred W. G. Wilson. 1913. 200m : 1".
Accompanying report No. 209.
Out of print. *Cat. No. M32-210*
- 211.—**Relative position of copper smelters and mines in southern British Columbia; map**, by Alfred W. G. Wilson. 1913. 35 m : 1".
Accompanying report No. 209.
Out of print. *Cat. No. M32-211*
- 212.—**The Eastern Townships of Quebec as a possible smelting centre; map**, by Alfred W. G. Wilson. 1913. 35m : 1".
Accompanying report No. 209.
Out of print. *Cat. No. M32-212*
- 213.—**Eastern Cape Breton as a possible smelting centre; map**, by Alfred W. G. Wilson. 1913. 35m : 1".
Accompanying report No. 209.
Out of print. *Cat. No. M32-213*

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- 214.—**Industries métallurgiques du cuivre au Canada**, par Alfred W. G. Wilson. 1917. 193p. 43 planches, 39 figures, 42 tableaux, 4 cartes.
See report No. 209 for English edition.
Édition épuisée. *N^o de cat. M32-214F*
- 215.—**Province of Alberta: properties from which samples of coal were taken for gas producer tests**, Fuel Testing Division, Ottawa; **index map**, by J. G. S. Hudson. 1913. 35m : 1".
Accompanying report No. 224.
35c. *Cat. No. M32-215*
- 216.—**Preliminary report on the mineral production of Canada during the calendar year 1912**, by John McLeish. 1913. 21p. Tables.
Part of report No. 224.
Out of print. *Cat. No. M32-216*
- 217.—**Iron ore occurrences in Canada**, compiled by E. Lindeman and L. L. Bolton, with introductory by A. H. A. Robinson. 1917. 2 volumes.
Vol. I.—Description of principal iron ore mines. 71p. 23 pls., 1 map in pocket and 22 maps enclosed in special case.
See maps No. 106, 107, 185, 185A, 186, 186A, 190, 190A, 191, 191A, 192, 192A, 205, 206, 207, 208, 208A, 208B, 208C, 340, 340A, 443, 445.
35c. *Cat. No. M32-217/1*
Vol. II.—Description of iron ore occurrences. 222p. 33 maps enclosed in special case.
See maps No. 187, 187A, 188, 188A, 189, 193, 193A, 194, 249 to 253, 261, 311, 312, 313, 341, 341A, 342, 342A, 343, 343A, 405, 409, 410, 416, 438, 439, 441, 442, 444, 446.
35c. *Cat. No. M32-217/2*
- 218.—Not published.
- 219.—**Les gisements de fer d'Austin Brook au Nouveau-Brunswick**, par Einar Lindeman. 1914. 14p. 3 planches, 5 figures, 2 cartes.
See report No. 105 for English edition.
Édition épuisée. *N^o de cat. M32-219F*
- 220.—**Mining districts, Yukon; index map**, by T. A. MacLean. 1914. 35m : 1".
Accompanying reports No. 222 and 224.
Out of print. *Cat. No. M32-220*
- 221.—**Dawson mining district, Yukon; index map**, by T. A. MacLean. 1914. 2m : 1".
Accompanying reports No. 222 and 224.
Out of print. *Cat. No. M32-221*
- 222.—**Lode mining in Yukon: an investigation of quartz deposits in the Klondike division**, by T. A. MacLean. 1914. 215p. 40 pls., 35 figs., tables, 6 maps.
Voir le rapport n^o 223 pour l'édition française. See maps No. 230, 221, 234 to 237.
Out of print. *Cat. No. M32-222*

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- 223.—**L'exploitation filonienne au Yukon; une investigation des gisements de quartz dans la division Klondike**, par T. A. MacLean. 1915. 197p. 40 planches, 35 figures, tableaux, 6 cartes.

See report No. 222 for English edition.

Édition épuisée.

N^o de cat. M32-223F

- 224.—**Summary report of the Mines Branch of the Department of Mines for the calendar year 1912**. 1913. 174p. 16 pls., 1 fig., tables, 3 maps. (Sess. Paper No. 26a-1913.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—REPORTS: *Chemical Laboratory*, by F. G. Wait; *Division of Mineral Resources and Statistics*, by John McLeish; *Assay Office*, by G. Middleton; *Fuel and Fuel Testing Division*; (1) *Test of lignite coal from Consumer's Coal Co., Moosejaw, Sask.*, by B. F. Haanel; (2) *Sampling of lignitic and semi-bituminous coals of Alberta for gas producer tests*, by J. G. S. Hudson; (3) *Chemical laboratory of Fuel Testing Station*, by E. Stansfield; (4) *Investigation of peat bogs*, by A. Anrep; (5) *Petroleum and natural gas resources of Canada*, by F. G. Clapp and L. G. Huntley; *Ore Dressing and Metallurgical Division*: (1) *Investigation of magnetic iron sands at Natashkwan, Que.*; (2) *Equipment of new Ore Dressing Laboratories*; and, (3) *Report on Parker-Lanier process of extracting gold from free-milling and refractory ores*, by G. C. Mackenzie.—PRELIMINARY REPORTS ON FIELD WORK: *Building and ornamental stones of Quebec*, by W. A. Parks; *Pyrites and copper*, by A. W. G. Wilson; *Mineral deposits in vicinity of St. Mary Bay, Nova Scotia*, by W. A. G. Wilson; *Moose Mountain iron-bearing district, Ont.*, by E. Lindeman; *Canadian market for various mineral products in a crude or partially prepared state*, by Howells Fréchette; *Continued examination of the phosphate and feldspar deposits of Ontario and Quebec*, by H. S. de Schmid; *Gypsum and salt industries of Canada*, by L. H. Cole; *Metal cobalt and its alloys*, by H. T. Kalmus; *Recent developments in electro-thermic production of iron and steel, 1911-12*, by H. T. Kalmus; *Quartz deposits in Klondike division*, by T. A. MacLean.—APPENDICES: *Mineral production of Canada, 1912* (See report No. 216); *Legislative administration of mineral lands in Canada*.

Voir le rapport n^o 224F pour l'édition française. See maps No. 215, 220 and 221.

Out of print.

Cat. No. M32-224

- 224F.—**Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile 1912**. 1914. 179p. 16 planches, 1 figure, tableaux, 3 cartes. (Doc. parl. n^o 26a-1913.)

Sommaire.—RAPPORT DU DIRECTEUR GENERAL, par Eugene Haanel.—RAPPORTS: *Laboratoire de chimie*, par F. G. Wait; *Division des Ressources minérales et des Statistiques*, par J. McLeish; *Essayerie du Canada à Vancouver*, par G. Middleton; *Division d'essai du combustible*: (1) *Essai de lignite de la "Consumers Coal Company" Moosejaw, Sask.*, par B. F. Haanel; (2) *Échantillon de houilles ligniteuses et semi-bitumineuses de l'Alberta, pour des épreuves de gazogènes*, par J. G. S. Hudson; (3) *Laboratoire chimique de la station d'essai du combustible* par E. Stansfield; (4) *Recherches sur les tourbières*, par A. Anrep; (5) *Le pétrole et les ressources du gaz naturel du Canada*, par F. G. Clapp et L. G. Huntley; *Préparation des minerais et division métallurgique*: (1) *Sables de fer magnétique à Natashkwan, Québec*; (2) *Les nouveaux laboratoires de métallurgie et de préparation des minerais*; et, (3) *Rapport sur le procédé de MM. Parker et Lanier pour l'extraction de l'or des minerais faciles à traiter et des minerais réfractaires*, par G. C. Mackenzie.—RAPPORTS PRELIMINAIRES DES TRAVAUX SUR LE TERRAIN: *Pierres de construction et d'ornement de la province de Québec*, par W. A. Parks; *Pyrites et cuivre; et Gisements de minerais dans le voisinage de la Baie Ste-Marie, N.-E.*, par A. W. G. Wilson; *District ferrifère de la montagne l'Original (Moose Mountain), Ont.*, par E. Lindeman; *Recherches sur le marché existant au Canada pour divers produits minéraux à l'état brut, ou partiellement préparés*, par Howells Fréchette; *Examen des gisements de phosphate et de feldspath dans l'Ontario et le Québec*, par

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

H. S. de Schmid; Industries du gypse et du sel au Canada, par L. H. Cole; Cobalt métallique et ses alliages; et, Progrès récents de la production électrothermique du fer et de l'acier, 1911-12, par H. T. Kalmus; Dépôts de quartz dans la division du Klondike, par T. A. MacLean.—APPENDICES: Rapport préliminaire au sujet de la production minérale au Canada, en 1912, par John McLeish; Législation administrative des terrains miniers au Canada.

See report No. 224 for English edition.

Édition épuisée.

N^o de cat. M32-224F

225.—Not published.

226.—**Rapport sur les dépôts de fer chromé des Cantons de l'Est de la province de Québec**, par Fritz Cirkel. 1912. 145p. 9 planches, 15 figures, 1 carte.

See report No. 29 for English edition.

Édition épuisée.

N^o de cat. M32-226F

227.—**Sections of the Sydney coal fields, Cape Breton**, by Joseph G. S. Hudson. 1913. 6 p. 15 pls., tables, 1 map.

See map No. 228.

Out of print.

Cat. No. M32-227

228.—**Sydney coal fields, Cape Breton, N.S.; index map**, by J. G. S. Hudson. 1913. 1¾m : 1".

Accompanying report No. 227.

Out of print.

Cat. No. M32-228

229.—**Summary report on the petroleum and natural gas resources of Canada**, by F. G. Clapp and L. G. Huntley. 1913. 14p.

Reprint from report No. 224.

Out of print.

Cat. No. M32-229

230.—**Economic minerals and mining industries of Canada**. 1913. 77p. 19pls., 1 map.

Voir le rapport n^o 231 pour l'édition française. See also reports No. 611 and 738, and map No. 232.

35c.

Cat. No. M32-230

231.—**Minéraux industriels et industries minières du Canada**. 1913. 85p. 19 planches, 1 carte.

See report No. 230 for English edition.

Édition épuisée.

N^o de cat. M32-231F

232.—**Mineral map of Canada**. 1913. 100m : 1".

Accompanying reports No. 230 and 322.

Out of print.

Cat. No. M32-232

233.—**Rapport sur les gisements de gypse des Provinces Maritimes**, par Williams F. Jennison. 1913. 181p. 36 planches, 17 figures, 3 cartes.

See report No. 84 for English edition.

Édition épuisée.

N^o de cat. M32-233F

234.—**Portion of Whitehorse copper belt; index map**, by T. A. MacLean. 1914. 8000' : 1".

Accompanying report No. 222.

Out of print.

Cat. No. M32-234

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—*Continued—Suite.*

- 235.—Portion of Windy Arm mining district; index map, by T.A. MacLean. 1914. 2m : 1".
Accompanying report No. 222.
Out of print. *Cat. No. M32-235*
- 236.—Vicinity of Wheaton river; map, by T. A. MacLean. 1914. 2m : 1".
Accompanying report No. 222.
Out of print. *Cat. No. M32-236*
- 237.—Dublin gulch, mining property; geological sketch map, by T. A. McLean. 1914. 2400' : 1".
Accompanying report No. 222.
Out of print. *Cat. No. M32-237*
- 238.—General summary of the mineral production of Canada during the calendar year 1912, by John McLeish. 1913. 46p. Tables.
Part of report No. 262.
25c. *Cat. No. M32-238*
- 239.—Index map of Canada showing gypsum occurrences, by L. H. Cole. 1913. 600m : 1".
Accompanying report No. 245.
Out of print. *Cat. No. M32-239*
- 240.—Map showing lower carboniferous formation in which gypsum occurs in the Maritime Provinces, by L. H. Cole. 1913. 100m : 1".
Accompanying report No. 245.
Out of print. *Cat. No. M32-240*
- 241.—Map showing relation of gypsum deposits in Northern Ontario to railway lines, by L. H. Cole. 1913. 100m : 1".
Accompanying report No. 245.
Out of print. *Cat. No. M32-241*
- 242.—Grand River gypsum deposits, Ontario; index map, by L. H. Cole. 1913. 4m : 1".
Accompanying report No. 245.
Out of print. *Cat. No. M32-242*
- 243.—Plan of Manitoba Gypsum Company's properties, by L. H. Cole. 1913. 6700' : 1".
Accompanying report No. 245.
Out of print. *Cat. No. M32-243*
- 244.—Map showing relation of gypsum deposits in British Columbia to railway lines and market, by L. H. Cole. 1914. 35m : 1".
Accompanying report No. 245.
Out of print. *Cat. No. M32-244*
- 245.—Gypsum in Canada: its occurrence, exploitation, and technology, by L. H. Cole. 1913. 256p. 30 pls., 27 figs., tables, 6 maps.
Appendices.—Gypsum operators in Canada.—Bibliography.—Gypsum deposits of the Maritime Provinces, by W. F. Jennison. (Reprinted from report No. 84.)
Voir le rapport n° 246 pour l'édition française. See maps No. 239, 240, 241, 242, 243, and 244.
Out of print. *Cat. No. M32-245*

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 246.—**Le gypse du Canada: ses gisements, son exploitation, et sa technologie**, par L. H. Cole. 1916. 252p. 30 planches, 27 figures, tableaux, 6 cartes.

Appendices.—Liste des exploitants de gypse.—Bibliographie.—Gisements de gypse des Provinces Maritimes, par W. F. Jennison. (Ré-imprimé du rapport n^o 233.)

See report No. 245 for English edition.

Édition épuisée.

N^o de cat. M32-246F

- 247.—**The production of iron and steel in Canada during the calendar year 1912**, by John McLeish. 1913. 39p. Tables.

Voir le rapport n^o 287 pour l'édition française. Advance chapter of report No. 262.

Out of print.

Cat. No. M32-247

- 248.—Not published.

- 249.—**Caldwell and Campbell mines**, Calabogie district, Renfrew county, Ontario; **magnetometric survey map**, by E. Lindeman. 1911. 200' : 1''.

Accompanying reports No. 217, Vol. II and 254.

35c.

Cat. No. M32-249

- 250.—**Black Bay or Williams mine**, Calabogie district, Renfrew county, Ontario; **magnetometric survey map**, by E. Lindeman. 1911. 200' : 1''.

Accompanying reports No. 217, Vol. II and 254.

Out of print.

Cat. No. M32-250

- 251.—**Bluff Point iron mine**, Calabogie district, Renfrew county, Ontario; **magnetometric survey map**, by E. Lindeman. 1911. 200' : 1''.

Accompanying reports No. 217, Vol. II and 254.

35c.

Cat. No. M32-251

- 252.—**Culhane mine**, Calabogie district, Renfrew county, Ontario; **magnetometric survey map**, by E. Lindeman. 1911. 200' : 1''.

Accompanying reports No. 254, and 217, Vol. II.

Out of print.

Cat. No. M32-252

- 253.—**Martel or Wilson iron mine**, Calabogie district, Renfrew county, Ontario; **magnetometric survey map**, by E. Lindeman. 1911. 200' : 1''.

Accompanying reports No. 254, and 217, Vol. II.

Out of print.

Cat. No. M32-253

- 254.—**Magnetite occurrences near Calabogie**, Renfrew county, Ontario, by E. Lindeman. 1914. 16p. 1 fig., 5 maps.

Voir le rapport n^o 255 pour l'édition française. See maps No. 249, 250, 251, 252, and 253.

Out of print.

Cat. No. M32-254

- 255.—**Les gisements de magnétite près de Calabogie**, comté de Renfrew, Ontario, par E. Lindeman. 1917. 20p. 1 figure, 5 cartes.

See report No. 254 for English edition.

25c.

N^o de cat. M32-255F

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—*Continued—Suite.*

- 256.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1912**, by C. T. Cartwright. 1913. 86p. Tables.

Advance chapter of report No. 262. Voir le rapport n^o 290 pour l'édition française.

Out of print.

Cat. No. M32-256

- 257.—**The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1912**, by John McLeish. 1913. 64p. Tables.

Advance chapter of report No. 262. Voir le rapport n^o 289 pour l'édition française.

25c.

Cat. No. M32-257

- 258.—**The production of coal and coke in Canada during the calendar year 1912**, by John McLeish. 1913. 42p. Tables.

Advance chapter of report No. 262. Voir le rapport n^o 288 pour l'édition française.

Out of print.

Cat. No. M32-258

- 259.—**Preparation of metallic cobalt by reduction of the oxide**, by H. T. Kalmus, and others. 1913. 36p. 8 pls., 4 figs., tables. (Researches on cobalt and cobalt alloys conducted at Queen's University, Kingston, Ontario, for the Mines Branch of the Department of Mines, Part I.)

Voir le rapport n^o 260 pour l'édition française. See also reports No. 309, 334, 411, and 413.

25c.

Cat. No. M32-259

- 260.—**Préparation du cobalt métallique par la réduction de l'oxyde**, par H. T. Kalmus et autres. 1916. 36p. 8 planches, 4 figures. (Recherches sur le cobalt et ses alliages, faites à l'Université Queens, de Kingston, Ontario, pour la Division des mines du Ministère des mines, partie 1.)

See report No. 259 for English edition. Voir aussi les rapports n^o 310, 335, 412, 414.

Édition épuisée.

N^o de cat. M32-260F

- 261.—**Northeast Arm iron range, Lake Timagami, Nipissing district, Ontario; magnetometric survey map**, by E. Nystrom 1903. 200': 1".

Accompanying report No. 217, Vol. II.

35c.

Cat. No. M32-261

- 262.—**Annual report on the mineral production of Canada during the calendar year 1912**, by John McLeish. 1914. 339p. Tables.

See separates No. 238, 247, 256, 257, 258 and 287.

75c.

Cat. No. M32-262

- 263.—**Progrès récents dans la construction des fours électriques pour la production de la fonte, de l'acier, et du zinc**, par Eugene Haanel. 1914. 86p. 1 planche, 17 figures, tableaux. (Bulletin n^o 3.)

See report No. 68 for English edition.

Édition épuisée.

N^o de cat. M32-263F

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 264.—**Mica: gisements, exploitation et emplois**, par Hugh S. de Schmid. Deuxième édition. 1914. 430p. 38 planches, 67 figures, 22 cartes.
See report No. 118 for English edition.
Édition épuisée. *N^o de cat. M32-264F*
- 265.—**Rapport annuel sur la production minérale du Canada durant l'année civile 1911**, par J. McLeish. 1914. 316p. Tableaux.
See report No. 201 for English edition.
Édition épuisée. *N^o de cat. M32-265F*
- 266.—**Investigation of the peat bogs and peat industry of Canada, 1911-12**, by A. Anrep. 1914. 47p. 29 pls., 6 figs., tables, 11 maps. (Bulletin No. 9.)
Voir le rapport n^o 267 pour l'édition française. See maps No. 268 to 278 inclusive.
35c. *Cat. No. M32-266*
- 267.—**Recherches sur les tourbières et l'industrie de la tourbe au Canada, 1911-12**, par A. Anrep. 1917. 47p. 29 planches, 6 figures, tableaux, 11 cartes.
See report No. 266 for English edition.
Édition épuisée. *N^o de cat. M32-267F*
- 268.—**Peat bogs investigated in Quebec; index map**, by A. Anrep. 1914. 35m : 1".
Accompanying report No. 266. See also map No. 484.
35c. *Cat. No. M32-268*
- 269.—**Large Tea Field peat bog, Quebec; map**, by A. Anrep. 1914. 2750' : 1".
Accompanying report No. 266.
Out of print. *Cat. No. M32-269*
- 270.—**Small Tea Field peat bog, Quebec; map**, by A. Anrep. 1914. 2750' : 1".
Accompanying report No. 266.
35c. *Cat. No. M32-270*
- 271.—**Lanoraie peat bog, Quebec; map**, by A. Anrep. 1914. 3000' : 1".
Accompanying report No. 266.
35c. *Cat. No. M32-271*
- 272.—**St. Hyacinthe peat bog, Quebec; map**, by A. Anrep. 1914. 2500' : 1".
Accompanying report No. 266.
Out of print. *Cat. No. M32-272*
- 273.—**Rivière du Loup peat bog, Quebec; map**, by A. Anrep. 1914. 2800' : 1".
Accompanying report No. 266.
Out of print. *Cat. No. M32-273*
- 274.—**Cacouna peat bog, Quebec; map**, by A. Anrep. 1914. 1350' : 1".
Accompanying report No. 266.
Out of print. *Cat. No. M32-274*

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Reports and maps—Rapports.—*Continued—Suite.*

- 275.—**Le Parc peat bog, Quebec; map**, by A. Anrep. 1914. 1300' : 1".
 Accompanying report No. 266.
 Out of print. *Cat. No. M32-275*
- 276.—**St. Denis peat bog, Quebec; map**, by A. Anrep. 1914. 1100' : 1".
 Accompanying report No. 266.
 Out of print. *Cat. No. M32-276*
- 277.—**Rivière Ouelle peat bog, Quebec; map**, by A. Anrep. 1914.
 2500' : 1".
 Accompanying report No. 266.
 Out of print. *Cat. No. M32-277*
- 278.—**Moose Mountain peat bog, Ontario; map**, by A. Anrep. 1914.
 300' : 1".
 Accompanying report No. 266.
 Out of print. *Cat. No. M32-278*
- 279.—**Report on the building and ornamental stones of Canada; Vol. III: Province of Quebec**, by Wm. A. Parks. 1914. 304p. 52 pls., 12 figs., tables.
 Voir le rapport n° 389 pour l'édition française. See also reports No. 100, 203, 388, and 452.
 75c. *Cat. No. M32-279*
- 280.—**Rapport sur les pierres de construction et d'ornement du Canada; Vol. II: Provinces Maritimes**, par Wm. A. Parks. 1916. 266p. 45 planches, 9 figures, tableaux.
 See report No. 203 for English edition. Voir aussi rapports n° 100A et 389.
 Édition épuisée. *N° de cat. M32-280F*
- 281.—**Preliminary report on the bituminous sands of Northern Alberta**, by S. C. Ells. 1914. 92p. 55 pls., 5 figs., tables, 1 map in pocket.
 Voir le rapport n° 282 pour l'édition française. See map No. 284. See also report No. 632.
 Out of print. *Cat. No. M32-281*
- 282.—**Rapport préliminaire sur les sables bitumineux de l'Alberta Nord**, par S. C. Ells. 1916. 96p. 55 planches, 5 figures, tableaux, 1 carte hors-texte.
 See report No. 281 for English edition.
 Édition épuisée. *N° de cat. M32-282F*
- 283.—**Preliminary report on the mineral production of Canada during the calendar year 1913**, by John McLeish. 1914. 21p. Tables.
 Part of report No. 285.
 Out of print. *Cat. No. M32-283*
- 284.—**Portion of Northern Alberta showing position of outcrops of bituminous sand; index map**, by S. C. Ells, 1914. 12½m : 1".
 Accompanying reports No. 281 and 285.
 Out of print. *Cat. No. M32-284*

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Reports and maps—Rapports.—Continued—Suite.

- 285.—Summary report of the Mines Branch of the Department of Mines for the calendar year 1913. 1914. 214p. 51 pls., 24 figs., table, 1 map. (Sess. Paper No. 26a-1914).

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL REPORTS:—*Metalliferous Division*: (1) Copper mines and copper mining in Canada; (2) Platinum discoveries in the vicinity of Nelson, B.C.; (3) Hall process for desulphurizing ores, by Alfred W. G. Wilson; (4) Iron ore occurrences in Cape Breton, by E. Lindeman; (5) Lode mining in Yukon, by T. A. MacLean:—*Non-metalliferous Division*: (1) Canadian markets for mineral products, by Howells Fréchette; (2) White mica occurrence in the Tête Jaune Cache and Big Bend, B.C., by Hugh S. de Schmid; (3) Saline springs of Manitoba, by L. H. Cole; (4) Bituminous sands of Northern Alberta, by S. C. Ells; (5) Building and ornamental stones of Quebec, by W. A. Parks:—*Ore dressing and metallurgical Division*: (1) Progress report, by G. C. Mackenzie; (2) Work of the Laboratories, by W. B. Timm; (3) Magnetic iron sands at Natashkwan, Que., by C. S. Parsons; (4) Processes for smelting zinc ores, by W. R. Ingalls; (5) Cobalt and its alloys, by Herbert T. Kalmus:—*Fuel Testing Division*: (1) Work at Fuel Testing Station, by B. F. Haanel; (2) Investigation of five lignite samples from Alberta, by B. F. Haanel and John Blizard; (3) Chemical Laboratory, by Edgar Stansfield; (4) Investigation of peat bogs, by Aleph von Anrep.—*Appendices*: Mineral production 1913 (see Report No. 283); Description of the Mines Branch Laboratories.

Voir le rapport n° 286 pour l'édition française. See map No. 284.

Out of print.

Cat. No. M32-285

- 286.—Rapport sommaire de la Division des mines du ministère des Mines, pour l'année civile 1913. 1915. 219p. 51 planches, 24 figures, tableaux, 1 carte. (Doc. parl. n° 26a-1914.)

Sommaire.—RAPPORT GENERAL DE DIRECTEUR, par Eugene Haanel.—RAPPORTS INDIVIDUELS: *Division métallifère*: (1) Mines de cuivre et exploitation du cuivre du Canada; (2) Découvertes de platine dans le voisinage de Nelson, B.C.; (3) Le procédé Hall pour le dessoufrage des minerais, par A. G. W. Wilson; (4) Les gisements de minerai de fer au Cap Breton, par E. Lindeman; (5) Exploitation des filons au Yukon, par T. A. MacLean:—*Division non-métallifère*: (1) Le marché canadien à la recherche de divers produits minéraux, par Howells Fréchette; (2) Gisements de mica blanc dans les districts de la cache de la Tête Jaune et de Big Bend, C.-B., par Hugh S. de Schmid; (3) Le sel du Canada, par L. H. Cole; (4) Sables bitumineux de l'Alberta Nord, par S. C. Ells; (5) Les pierres de construction et d'ornement de Québec, par W. A. Parks:—*Division de la métallurgie et de la préparation du minerai*: (1) Rapport des opérations, par G. S. Mackenzie; (2) Travaux aux laboratoires, par W. B. Timm; (3) Recherches sur les sables magnétiques de Natashkwan, Qué., par C. S. Parsons; (4) Recherches sur le zinc, par R. W. Ingalls; (5) Recherches sur le cobalt et les alliages du cobalt, par Herbert T. Kalmus:—*Division des combustibles et d'essai de combustibles*: (1) Travaux à la station des essais, par B. F. Haanel; (2) Résultat de l'examen de cinq échantillons de lignite d'Alberta, par B. F. Haanel et John Blizard; (3) Laboratoires de chimie, par Edgar Stansfield; (4) Recherches sur les tourbières, par Aleph von Anrep.—*Appendices*: Rapport préliminaire sur la production minérale du Canada en 1913, par John McLeish; Description des laboratoires de la division des Mines.

See report No. 285 for English edition.

Édition épuisée.

N° de cat. M32-286F

- 287.—La production du fer et de l'acier au Canada pendant l'année civile 1912, par J. McLeish. 1915. 40p. Tableaux.

See report No. 247 for English edition.

Édition épuisée.

N° de cat. M32-287F

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Reports and maps—Rapports.—*Continued—Suite.*

- 288.—**La production de charbon et de coke au Canada pendant l'année civile 1912**, par John McLeish. 1914. 40p. Tableaux.
See report No. 258 for English edition.
Édition épuisée. *N^o de cat. M32-288F*
- 289.—**La production du ciment, de la chaux, des produits d'argile, de la pierre et d'autres matériaux de construction au Canada pendant l'année civile 1912**, par John McLeish. 1914. 64p. Tableaux.
See report No. 257 for English edition.
Édition épuisée. *N^o de cat. M32-289F*
- 290.—**La production de cuivre, or, plomb, nickel, argent, zinc et autres métaux au Canada pendant l'année civile 1912**, par Cosmo T. Cartwright. 1914. 86p. Tableaux.
See report No. 256 for English edition.
Édition épuisée. *N^o de cat. M32-290F*
- 291.—**Petroleum and natural gas resources of Canada**, by F. G. Clapp and others. 1914-1915. 2 v.
Vol. 1—Technology and exploitation. 378p. 21 pls., 25 figs., tables, 1 map.
See map No. 293. Voir le rapport n^o 292 pour l'édition française.
Out of print. *Cat. No. M32-291/1*
Vol. 2.—Description of occurrences. 1915. 404p. Illus., tables, maps.
Out of print. *Cat. No. M32-291/2*
- Separate parts of volume 2**
- Vol. 2, part 1.—Eastern Canada.** 245p. 12 pls., 23 figs., 3 maps.
See maps No. 294, 295, and 296.
75c. *Cat. No. M32-291/21*
- Vol. 2, part 2.—Western Canada.** 159p. 19 pls., 17 figs., 3 maps.
See maps No. 297, 298, and 302.
35c. *Cat. No. M32-291/22*
- 292.—**Ressources du Canada en pétrole et en gaz naturel. Volume 1: Technologie et exploitation**, par Frederick G. Clapp. 1917. 398p. 21 planches, 25 figures, tableaux, 1 carte.
See report No. 291, Vol. I, for English edition.
Édition épuisée. *N^o de cat. M32-292F*
- 293.—**Dominion of Canada; map showing the occurrences of oil, gas, and tar sands.** 1915. 197.3m : 1".
Accompanying report No. 291, Vol. I.
Out of print. *Cat. No. M32-293*
- 294.—**Reconnaissance map of part of Albert and Westmorland counties, New Brunswick**, by R. W. Ells and S. C. Ells. 1915. 1m : 1".
Accompanying report No. 291, Vol. 2.
Out of print. *Cat. No. M32-294*
- 295.—**Gaspé oil fields, Quebec; sketch plan showing location of wells.** 1915. 2m : 1".
Accompanying report No. 291, Vol. 2.
Out of print. *Cat. No. M32-295*

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Reports and maps—Rapports.—*Continued—Suite.*

- 296.—**Southwestern Ontario; map showing gas and oil fields and pipelines.** 1915. 4m : 1".
Accompanying report No. 291, Vol. 2. See also map No. 523.
Out of print. *Cat. No. M32-296*
- 297.—**Alberta, Saskatchewan, and Manitoba; geological map,** by W. Malcolm. 1914. 35m : 1".
Accompanying report No. 291, Vol. 2.
Out of print. *Cat. No. M32-297*
- 298.—**Forty-ninth parallel, B.C. and Alberta; geological map,** by R. A. Daly. 1913. 1m : 1".
Accompanying report No. 291, Vol. 2.
Out of print. *Cat. No. M32-298*
- 299.—**Peat, lignite, and coal: their value as fuels for the production of gas and power in the by-product recovery producer,** by B. F. Haanel. 1914. 261p. 29 pls., 39 figs., tables.
Voir le rapport n^o 300 pour l'édition française.
75c. *Cat. No. M32-299*
- 300.—**Tourbe, lignite, et houille: leur valeur respective comme source de gaz de moteur et d'énergie, dans les gazogènes à sous-produits,** par B. F. Haanel. 1917. 206p. 29 planches, 39 figures, 20 tableaux.
See report No. 299 for English edition.
Édition épuisée. *N^o de cat. M32-300F*
- 301.—Not published.
- 302.—**Bow Island—Calgary; map showing location of main gas line.** 1915. 12½m : 1".
Accompanying report No. 291, Vol. 2.
Out of print. *Cat. No. M32-302*
- 303.—**Moose Mountain iron-bearing district, Ontario,** by E. Lindeman. 1914. 14p. 2 figs., 8 maps in envelope.
Voir le rapport n^o 304 pour l'édition française. See maps No. 205, 205A, 206, 207, 208, 208A, 208B, 208C.
30c. *Cat. No. M32-303*
- 304.—**Le district ferrifère de Moose-Mountain, Ontario,** par E. Lindeman. 1917. 12p. 2 figures, 8 cartes dans une enveloppe.
See report No. 303 for English edition.
30c. *N^o de cat. M32-304F*
- 305.—**Report on the non-metallic minerals used in the Canadian manufacturing industries,** by Howells Fréchette. 1914. 199p. 37 tables.
Voir le rapport n^o 306 pour l'édition française.
75c. *Cat. No. M32-305*
- 306.—**Rapport sur les minéraux non-métalliques employés dans les industries manufacturières du Canada,** par Howells Fréchette. 1917. 204p. 37 tableaux.
See report No. 305 for English edition.
Édition épuisée. *N^o de cat. M32-306F*

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- 307.—**Catalogue des publications francaises du ministère des Mines** (Division des mines et Commission géologique), jusqu'au 1^{er} juillet 1914.

Édition épuisée.

N^o de cat. M32-307F

- 308.—**Recherches sur les charbons du Canada**, au point de vue de leurs qualités économiques, faites à l'Université McGill de Montréal sous le patronage du Gouvernement du Dominion, par J. B. Porter, R. J. Durley et autres. 1914-1917. Volume 1-4 et 6.

See report No. 83 for English edition.

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Vol. 1.—Rapport, parties 1-6. 1914. 275p. 46 planches, 31 figures, tableaux, 5 cartes.

Édition épuisée.

N^o de cat. M32-308/1F

Vol. 2.—Rapport, parties 7-9. 1915. 210p. 17 planches, 25 figures, tableaux.

Édition épuisée.

N^o de cat. M32-308/2F

Vol. 3.—Appendice 1: Résultats détaillés des essais de lavage de charbons, par J. B. Porter. 1915. 172p. Tableaux, graphiques.

Édition épuisée.

N^o de cat. M32-308/3F

Vol. 4.—Appendice 2: Résultats détaillés des essais aux chaudières, par R. J. Durley. 1915. 424p. Tableaux, graphiques.

Édition épuisée.

N^o de cat. M32-308/4F

Vol. 5.—Appendice 3: (paru en anglais seulement).

Vol. 6.—Appendice 4: Fabrication et essai du coke, par Edgar Stansfield et J. B. Porter; **appendice 5: Travaux de laboratoire**, par Edgar Stansfield. 1917. 127p. 3 planches, 6 figures, 25 tableaux.

Édition épuisée.

N^o de cat. M32-308/6F

- 309.—**The Physical properties of the metal cobalt**, by H. T. Kalmus and C. Harper. 1914. 48p. 14 pls., 8 figs., tables. (Researches on cobalt and cobalt alloys, conducted at Queen's University, Kingston, Ontario, for the Mines Branch of the Department of Mines, Part 2.)

Voir le rapport n^o 310 pour l'édition française. See also reports No. 259, 334 411, and 413.

35c.

Cat. No. M32-309

- 310.—**Propriétés physiques du cobalt métallique**, par H. T. Kalmus. 1916. 51p. 14 planches, 8 figures, tableaux. (Recherches sur le cobalt et ses alliages, faites à l'Université Queens, de Kingston, Ontario, pour la Division des mines, du ministère des Mines, partie 2.)

See report No. 309 for English edition. Voir aussi rapports n^{os} 260, 335, 412 et 414.

Édition épuisée.

N^o de cat. M32-310F

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- 311.—**McPherson mine**, Barachois, Cape Breton county, Nova Scotia; **magnetometric map**, by A. H. A. Robinson. 1913. 200' : 1".
Accompanying report No. 217, Vol. II.
Out of print. *Cat. No. M32-311*
- 312.—**Iron ore deposits at Upper Glencoe**, Inverness county, Nova Scotia; **magnetometric map**, by E. Lindeman. 1913. 200' : 1".
Accompanying report No. 217, Vol. II.
Out of print. *Cat. No. M32-312*
- 313.—**Iron ore deposits at Grand Mira**, Cape Breton county, Nova Scotia; **magnetometric map**, by A. H. A. Robinson. 1913. 200' : 1".
Accompanying report No. 217, Vol. II.
Out of print. *Cat. No. M32-313*
- 314.—**Gisements de minerais de fer de la mine Bristol**, comté de Pontiac, Québec: **Levé magnétométrique**, etc., par E. Lindeman; **Concentration magnétique de minerais**, par Geo. S. Mackenzie. 1915. 15p. 2 planches, 2 tableaux et deux cartes hors-texte. (Bulletin n° 2.)
See report No. 67 for English edition.
Édition épuisée. *N° de cat. M32-314F*
- 315.—**The production of iron and steel in Canada during the calendar year 1913**, by John McLeish. 1914. 44p. Tables.
Advance chapter of report No. 320.
Out of print. *Cat. No. M32-315*
- 316.—**The production of coal and coke in Canada during the calendar year 1913**, by John McLeish. 1914. 40p. Tables.
Advance chapter of report No. 320.
Out of print. *Cat. No. M32-316*
- 317.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1913**, by Cosmo T. Cartwright. 1914. 77p. Tables.
Advance chapter of report No. 320.
Out of print. *Cat. No. M32-317*
- 318.—**The production of cement, lime, clay products, stone and other structural materials in Canada during the calendar year 1913**, by John McLeish. 1914. 62p. Tables.
Advance chapter of report No. 320.
Out of print. *Cat. No. M32-318*
- 319.—**General summary of the mineral production of Canada during the calendar year 1913**, by John McLeish. 1914. 50p. Diagrams, tables.
Advance chapter of report No. 320.
Out of print. *Cat. No. M32-319*
- 320.—**Annual report on the mineral production of Canada during the calendar year 1913**, by John McLeish. 1914. 363p. Diagrams, tables.
Voir le rapport n° 321 pour l'édition française. See separates No. 315, 316, 317, 318, and 319.
35c. *Cat. No. M32-320*

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- 321.—**Rapport annuel de la production minérale du Canada durant l'année civile 1913**, par John McLeish. 1915. 364p. Diagrammes, tableaux.
See report No. 320 for English edition.
Édition épuisée. N^o de cat. M32-321F
- 322.—**Economic minerals and mining industries of Canada**. Second edition. 1914. 78p. 19 pls., 1 map in pocket.
Special edition prepared for the Panama-Pacific Exposition, San Francisco, 1915.
Out of print. Cat. No. M32-322
- 323.—**Products and by-products of coal**, by E. Stansfield and F. E. Carter. 1915. 51p. Tables.
Voir le rapport n^o 324 pour l'édition française.
25c. Cat. No. M32-323
- 324.—**Produits et sous-produits de la houille**, par E. Stansfield et F. E. Carter. 1917. 60p. Tableaux.
See report No. 323 for English edition.
Édition épuisée. N^o de cat. M32-324F
- 325.—**Report on the salt deposits of Canada and the salt industry**, by L. Heber Cole. 1915. 152p. 26 pls., 25 figs., 4 maps.
Voir le rapport n^o 326 pour l'édition française. See maps No. 327, 328, 329, and 330. See also reports No. 716.
75c. Cat. No. M32-325
- 326.—**Rapport sur les dépôts salifères du Canada et l'industrie du sel**, par L. Heber Cole. 1917. 172p. 27 planches, 25 figures, 4 cartes.
See report No. 325 for English edition.
Édition épuisée. N^o de cat. M32-326F
- 327.—**Dominion of Canada; map showing location of saline springs and salt areas**, by L. Heber Cole. 1915. 600m : 1".
Accompanying report No. 325.
35c. Cat. No. M32-327
- 328.—**Maritime Provinces; map showing location of saline springs**, by L. Heber Cole. 1915. 100m : 1".
Accompanying report No. 325.
35c. Cat. No. M32-328
- 329.—**Ontario-Michigan salt basin; map showing probable limit of productive area**, by L. Heber Cole. 1915. 25m : 1".
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35c. Cat. No. M32-329
- 330.—**Northern Manitoba; map showing location of saline springs**, by L. H. Cole. 1915. 12½m : 1".
Accompanying report No. 325.
35c. Cat. No. M32-330
- 331.—**Results of the investigation of six lignite samples obtained from the province of Alberta**, by B. F. Haanel and John Blizard. 1915. 110p. 5 pls., 29 figs., tables.
35c. Cat. No. M32-331

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332.—Not published.

333.—**Preliminary report on the mineral production of Canada during the calendar year 1914**, by John McLeish. 1915. 24p. Tables.

Part of report No. 346.

Out of print.

Cat. No. M32-333

334.—**Electro-plating with cobalt**, by H. T. Kalmus, assisted by C. H. Harper and W. L. Savell. 1915. 69p. 4 figs., tables. (Researches on cobalt and cobalt alloys, conducted at Queen's University, Kingston, Ontario, for the Mines Branch of the Department of Mines, Part 3.)

Voir le rapport n^o 335 pour l'édition française. See also reports No. 259, 309, 411, and 413.

35c.

Cat. No. M32-334

335.—**Galvanoplastie au cobalt**, par H. T. Kalmus, en collaboration avec C. H. Harper et W. L. Savell. 1917. 76p. 4 figures, tableaux. (Recherches sur le cobalt et ses alliages, faites à l'Université Queens de Kingston, Ontario, pour la Division des mines du ministère des Mines, 3^e partie.)

See report No. 334 for English edition. Voir aussi rapports n^o 260, 310, 412 et 414.

Édition épuisée.

N^o de cat. M32-335F

336.—**Notes on clay deposits near McMurray, Alberta**, by Sydney C. Ells. 1915. 15p. (Bulletin No. 10.)

15c.

Cat. No. M32-336

337.—**Catalogue of Mines Branch publications** (8th to 11th editions).

Out of print.

Cat. No. M32-337

338.—**An investigation of the coal of Canada** with reference to their economic qualities as conducted at McGill University, Montreal, under the authority of the Dominion Government. Extra volume supplementing report No. 83: **Weathering of coal**, by J. B. Porter and others. 1915. 194p. 6 pls., 65 figs., tables.

\$1.30

Cat. No. M32-338

339.—Not published.

340.—**Atikokan iron-bearing district**, Atikokan mine and vicinity, Rainy River district, Ontario; **magnetometric map** of claims No. 10E, 11E, 12E, 24E, 25E, and 26E, by A. H. A. Robinson. 1914. 400' : 1''.

Accompanying report No. 217, Vol. 1.

Out of print.

Cat. No. M32-340

340A.—**Atikokan iron-bearing district**, Atikokan mine and vicinity, Rainy River district, Ontario; **geological map** of claims No. 10E, 11E, 12E, 24E, 25E, and 26E, by A. H. A. Robinson. 1914. 400' : 1''.

Accompanying report No. 217, Vol. I.

35c.

Cat. No. M32-340A

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- 341.—Atikokan iron-bearing district, Rainy River district, Ontario; **magnetometric map**, sheet No. 1, claims No. 400R, 401R, 402R, 212X, and 403R, by E. Lindeman. 1914. 400' : 1".

Accompanying report No. 217, Vol. 2.

35c.

Cat. No. M32-341

- 341A.—Atikokan iron-bearing district, Rainy River district, Ontario; **geological map**, sheet No. 1, claims No. 400R, 401R, 402R, 212X, and 403R, by E. Lindeman. 1914. 400' : 1".

Accompanying report No. 217, Vol. 2.

35c.

Cat. No. M32-341A

- 342.—Atikokan iron-bearing district, Rainy River district, Ontario; **magnetometric map**, sheet No. 2, claims No. 403R, 404R, 138X, 139X, and 140X, by E. Lindeman. 1914. 400' : 1".

35c.

Cat. No. M32-342

- 342A.—Atikokan iron-bearing district, Rainy River district, Ontario; **geological map**, sheet No. 2, claims No. 403R, 404R, 138X, 139X, and 140X, by E. Lindeman. 1914. 400' : 1".

35c.

Cat. No. M32-342A

- 343.—Atikokan iron-bearing district, Mile Post No. 140, Canadian Northern railway, Rainy River district, Ontario; **magnetometric map**, by E. Lindeman. 1914. 400' : 1".

Accompanying report No. 217, Vol. 2.

35c.

Cat. No. M32-343

- 343A.—Atikokan iron-bearing district, Mile Post No. 140, Canadian Northern Railway, Rainy River district, Ontario; **geological map**, by E. Lindeman. 1914. 400' : 1".

Accompanying report No. 217, Vol. 2.

35c.

Cat. No. M32-343A

- 344.—Electrothermic smelting of iron ores in Sweden, by A. Stansfield. 1915. 65p. 7 pls., 5 figs., tables.

Voir le rapport n° 345 pour l'édition française.

35c.

Cat. No. M32-344

- 345.—Réduction électrothermique des minerais de fer en Suède, par Alfred Stansfield. 1917. 67p. 7 planches, 5 figures, tableaux.

See report No. 344 for English edition.

Édition épuisée.

N° de cat. M32-345F

- 346.—Summary report of the Mines Branch of the Department of Mines, for the calendar year ending December 31, 1914. 1915. 232p. 12 pls., 15 figs., tables. (Sess. Paper No. 26a-1915.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL REPORTS:—*Metalliferous Division*: (1) Examination of certain copper deposits in Quebec, by A. W. G. Wilson; (2) The Atikokan and Matawin iron ranges, by E. Lindeman; (3) The Atikokan iron range, by A. H. A. Robinson:—*Non-Metalliferous Division*: (1) Limestones of the province of Quebec, by Howells Fréchette; (2) Investigation of miscellaneous non-metallic minerals, by H. S. de Schmid; (3) Sand areas of Quebec, by L. H. Cole; (4) Bituminous sands of northern Alberta,

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Voir le rapport n° 347 pour l'édition française.

35c.

Cat. No. M32-346

- 347.—**Rapport sommaire de la Division des mines du ministère des Mines pour l'année terminée le 31 décembre 1914.** 1916. 238p. 12 planches, 15 figures, tableaux. (Doc. de la session n° 26a-1915.)

Sommaire.—RAPPORT DU DIRECTEUR GÉNÉRAL, par Eugène Haanel.—RAPPORTS INDIVIDUELS:—*Division de métallurgie*: (1) *Examen de certains dépôts de cuivre dans Québec*, par A. W. G. Wilson; (2) *Les régimes de fer Atikokan et Matawin*, par E. Lindeman; (3) *Champ ferrugineux d'Atikokan*, par A. H. A. Robinson:—*Division non-métallifère*: (1) *Pierres calcaires de la province de Québec*, par Howells Fréchette; (2) *Enquete sur divers minerais non métalliques*, par H. S. de Schmidt; (3) *Sables de la province de Québec*, par L. H. Cole; (4) *Les sables bitumineux de l'Alberta septentrional*, par S. C. Ells; (5) *Pierres de construction et d'ornementation*, par W. A. Parks:—*Traitement du minerai et Division de la métallurgie*: (1) *Rapport*, par G. C. Mackenzie; (2) *Électro-placage au cobalt*, par H. T. Kalmus:—*Division des combustibles et d'essai de combustibles*: (1) *Laboratoires chimiques*, par E. Stansfield; (2) *Recherches sur les tourbières*, par A. Anrep; (3) *Travaux mécaniques effectués à la Station de l'épreuve des combustibles*, par A. W. Mantle:—*Laboratoire de chimie, rue Sussex*, par F. G. Wait:—*Rapport des ressources minérales et des statistiques*, par J. McLeish:—*Désastre de la mine Hillcrest*, par J. G. S. Hudson.—**Appendices**: *Rapport préliminaire concernant la production minérale du Canada, 1914*, par J. McLeish:—*Loi des explosifs*, 4-5 George V.

See report No. 346 for English edition.

Édition épuisée.

N° de cat. M32-347F

- 348.—**The production of coal and coke in Canada during the calendar year 1914**, by John McLeish. 1915. 39p. Tables.

Advance chapter of report No. 384.

15c.

Cat. No. M32-348

- 349.—**The production of iron and steel in Canada during the calendar year 1914**, by John McLeish. 1915. 35p. Tables.

Advance chapter of report No. 384.

15c.

Cat. No. M32-349

- 350.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1914.** 1915. 75p.

Advance chapter of report No. 384.

15c.

Cat. No. M32-350

- 351.—**Investigation of the peat bogs and peat industry of Canada, 1913-14**, by A. Anrep. 1915. 185p. 92 pls., 66 figs., tables, 30 maps. (Bulletin No. 11.)

Voir le rapport n° 352 pour l'édition française. See maps No. 354 to 383 inclusive.

Out of print.

Cat. No. M32-351

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- 352.—**Recherches sur les tourbières et l'industrie de la tourbe au Canada, 1913-1914**, par Aleph Anrep. 1917. 191p. 92 planches, 66 figures, tableaux, 30 cartes. (Bulletin n° 11.)
See report No. 351 for English edition.
Édition épuisée. *N° de cat. M32-352F*
- 353.—Not published.
- 354.—**Index map, showing location of peat bogs investigated in Ontario**, by A. Anrep. 1915. 35m : 1".
Accompanying report No. 351. See also map No. 477.
Out of print. *Cat. No. M32-354*
- 355.—**Richmond peat bog**, Carleton county, Ontario; **map**, by A. Anrep. 1915. 3400' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-355*
- 356.—**Luther peat bog**, Wellington and Dufferin counties, Ontario; **map**, by A. Anrep. 1915. 3000' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-356*
- 357.—**Amaranth peat bog**, Dufferin county, Ontario; **map**, by A. Anrep. 1915. 2200' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-357*
- 358.—**Cargill peat bog**, Bruce county, Ontario; **map**, by Al Anrep. 1915. 6800' : 1".
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- 359.—**Westover peat bog**, Wentworth county, Ontario; **map**, by A. Anrep. 1915. 4000' : 1".
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Out of print. *Cat. No. M32-359*
- 360.—**Mash Hill peat bog**, Ontario county, Ontario; **map**, by A. Anrep. 1915. 4000' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-360*
- 361.—**Sunderland peat bog**, Ontario county, Ontario; **map**, by A. Anrep. 1915. 2400' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-361*
- 362.—**Manila peat bog**, Victoria county, Ontario; **map**, by A. Anrep. 1915. 2400' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-362*
- 363.—**Stoco peat bog**, Hastings county, Ontario; **map**, by A. Anrep. 1915. 1900' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-363*

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- 364.—**Clareview peat bog**, Lennox and Addington counties, Ontario; **map**, by A. Anrep. 1915. 2000' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-364*
- 365.—**Index map**, showing location of peat bogs investigated in Quebec, by A. Anrep. 1915. 35m : 1".
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Out of print. *Cat. No. M32-365*
- 366.—**L'Assomption peat bog**, L'Assomption county, Quebec; **map**, by A. Anrep. 1915. 3800' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-366*
- 367.—**St. Isidore peat bog**, La Prairie county, Quebec; **map**, by A. Anrep. 1915. 2400' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-367*
- 368.—**Holton peat bog**, Chateauguay county, Quebec; **map**, by A. Anrep. 1915. 3800' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-368*
- 369.—**Index map**, showing location of peat bogs investigated in Nova Scotia and Prince Edward Island, by A. Anrep. 1915. 35m : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-369*
- 370.—**Black Marsh bog**, Prince county, Prince Edward Island; **map**, by A. Anrep. 1915. 1900' : 1".
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Out of print. *Cat. No. M32-370*
- 371.—**Portage peat bog**, Prince county, Prince Edward Island; **map**, by A. Anrep. 1915. 2600' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-371*
- 372.—**Miscouche peat bog**, Prince county, Prince Edward Island; **map**, by A. Anrep. 1915. 3400' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-372*
- 373.—**Muddy Creek peat bog**, Prince county, Prince Edward Island; **map**, by A. Anrep. 1915. 1220' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-373*
- 374.—**The Black Banks peat bog**, Prince county, Prince Edward Island; **map**, by A. Anrep. 1915. 2000' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-374*

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- 375.—**Mermaid peat bog**, Queens county, Prince Edward Island; **map**, by A. Anrep. 1915. 1050' : 1".
Accompanying report No. 351.
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- 376.—**Caribou peat bog**, Kings county, Prince Edward Island; **map**, by A. Anrep. 1915. 2500' : 1".
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- 377.—**Cherryfield peat bog**, Lunenburg county, Nova Scotia; **map**, by A. Anrep. 1915. 1100' : 1".
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- 378.—**Tusket peat bog**, Yarmouth county, Nova Scotia; **map**, by A. Anrep. 1915. 1250' : 1".
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- 379.—**Makoke peat bog**, Yarmouth county, Nova Scotia; **map**, by A. Anrep. 1915. 1900' : 1".
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Out of print. *Cat. No. M32-379*
- 380.—**Heath peat bog**, Yarmouth county, Nova Scotia; **map**, by A. Anrep. 1915. 2700' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-380*
- 381.—**Port Clyde peat bog**, Shelburne county, Nova Scotia; **map**, by A. Anrep. 1915. 2200' : 1".
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- 382.—**Latour peat bog**, Shelburne county, Nova Scotia; **map**, by A. Anrep. 1915. 2400' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-382*
- 383.—**Clyde peat bog**, Shelburne county, Nova Scotia; **map**, by A. Anrep. 1915. 4500' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-383*
- 383A.—**The production of cement, lime, clay products, stone and other structural materials in Canada during the calendar year 1914**, by John McLeish. 1915. 60p. Tables.
Advance chapter of report No. 384.
Out of print. *Cat. No. M32-383A*
- 384.—**Annual report on the mineral production of Canada during the calendar year 1914**, by John McLeish. 1915. 362p. Tables.
Voir le rapport n^o 415 pour l'édition française. See separates No. 348, 349, 350 and 383A.
Out of print. *Cat. No. M32-384*

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Reports and maps—Rapports.—*Continued—Suite.*

- 385.—**Investigation of a reported discovery of phosphate in Alberta**, by H. S. de Schmid. 1916. 38p. 12 pls., 1 fig., 1 map. (Bulletin No. 12.)

Voir le rapport n^o 386 pour l'édition française. See map No. 387.

25c.

Cat. No. M32-385

- 386.—**Recherches sur un gisement de phosphate signalé dans l'Alberta**, par H. S. de Schmid. 1917. 41p. 12 planches, 1 figure, 1 carte. (Bulletin n^o 12.)

See report No. 385 for English edition.

25c.

N^o de cat. M32-386F

- 387.—**Banff district, Alberta; geological map showing location of phosphate beds**, by J. A. Allan. 1916. 1½ m : 1".

Accompanying report No. 385.

35c.

Cat. No. M32-387

- 388.—**Report on the building and ornamental stones of Canada; Vol. IV: Provinces of Manitoba, Saskatchewan and Alberta**, by W. A. Parks. 1916. 333p. 56 pls., 7 figs., 1 map.

See also reports No. 100, 203, 279, 452.

\$1.30

Cat. No. M32-388

- 389.—**Rapport sur les pierres de construction et d'ornement du Canada; Volume 3: Province de Québec**, par W. A. Parks. 1916. 330p. 52 planches, 12 figures, tableaux.

See report No. 279 for English edition. Voir aussi rapports n^o 100A et 280.

Édition épuisée.

N^o de cat. M32-389F

- 390.—**Christina river map**, showing outcrops of bituminous sand along Christina valley; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".

See also map No. 633.

Out of print.

Cat. No. M32-390

- 391.—**Clearwater river map**, showing outcrops of bituminous sand along Clearwater valley; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".

See also maps No. 633, 634.

Out of print.

Cat. No. M32-391

- 392.—**Hanginstone-Horse rivers map**, showing outcrops of bituminous sand along Hanginstone and Horse River valleys; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".

See also map No. 635.

Out of print.

Cat. No. M32-392

- 393.—**Steepbank river map**, showing outcrops of bituminous sand along Steepbank valley; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".

See also map No. 636.

Out of print.

Cat. No. M32-393

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 394.—**McKay river map** (3 sheets), showing outcrops of bituminous sand along McKay valley; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".
See map No. 637.
Out of print. *Cat. No. M32-394*
- 395.—**Moose river map**, showing outcrops of bituminous sand along Moose valley; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".
See also map No. 638.
Out of print. *Cat. No. M32-395*
- 396.—**Phosphate in Canada**, by Hugh S. Spence. 1920. 156p. 32 pls., 12 figs., 13 maps.
Voir le rapport n^o 397 pour l'édition française. See maps No. 398, 399.
35c. *Cat. No. M32-396*
- 397.—**Le phosphate au Canada**, par Hugh S. Spence. 1921. 169p. 31 planches, 12 figures, 13 cartes.
See report No. 396 for English edition.
Édition épuisée. *N^o de cat. M32-397F*
- 398.—**Ontario phosphate area; index map**, showing location of the principal mines and occurrences, by H. S. de Schmid. 1916. 3.95m : 1".
Accompanying report No. 396.
Out of print. *Cat. No. M32-398*
- 399.—**Quebec phosphate area; index map**, showing location of the principal mines and occurrences, by H. S. de Schmid. 1916. 3.95m : 1".
Accompanying report No. 396.
Out of print. *Cat. No. M32-399*
- 400.—Not published.
- 401.—**Feldspar in Canada**, by Hugh S. de Schmid. 1916. 125p. 22 pls., 12 figs., tables, 2 maps.
Voir le rapport n^o 402 pour l'édition française. See maps No. 403 and 404.
35c. *Cat. No. M32-401*
- 402.—**Feldspath au Canada**, par Hugh S. de Schmid. 1918. 132p. 22 planches, 12 figures, tableaux, 2 cartes.
See report No. 401 for English edition.
Édition épuisée. *N^o de cat. M32-402F*
- 403.—**Ontario feldspar area; map** showing location of the principal feldspar quarries, by H. S. de Schmid. 1916. 3.95m : 1".
Accompanying report No. 401.
35c. *Cat. No. M32-403*
- 404.—**Quebec feldspar area; map** showing location of the principal feldspar quarries, by H. S. de Schmid. 1916. 3.95m : 1".
Accompanying report No. 401.
Out of print. *Cat. No. M32-404*

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 405.—Orton mine and vicinity, Hastings county, Ontario; **magneto-metric map**, by A. H. A. Robinson. 1915. 200' : 1".

Accompanying report No. 217, Vol. 2.

Out of print.

Cat. No. M32-405

- 406.—Description of the laboratories of the Mines Branch of the Department of Mines, Ottawa. 1916. 51p. 60 pls., 12 figs. (Bulletin No. 13.)

35c.

Cat. No. M32-406

- 407.—Not published.

- 408.—Preliminary report on the mineral production of Canada during the calendar year 1915, by J. McLeish. 1916. 28p. Tables.

Part of report No. 421.

Out of print.

Cat. No. M32-408

- 409.—Kaministiquia, Thunder Bay district, Ontario; **magnetometric map**, by A. H. A. Robinson. 1916. 400' : 1".

Accompanying report No. 217, Vol. 2.

Out of print.

Cat. No. M32-409

- 410.—Kaministiquia, Thunder Bay district, Ontario; **geological map**, by A. H. A. Robinson. 1916. 400' : 1".

Accompanying report No. 217, Vol. 2.

Out of print.

Cat. No. M32-410

- 411.—Cobalt alloys with non-corrosive properties, by Herbert T. Kalmus and K. B. Blake. 1916. 37p. 31 pls., 50 figs., tables. (Researches on cobalt and cobalt alloys, conducted at Queen's University, Kingston, Ontario, for the Mines Branch of the Department of Mines, Part 4.)

Voir le rapport n° 412 pour l'édition française. See also reports No. 259, 309, 334 and 413.

35c.

Cat. No. M32-411

- 412.—Les alliages de cobalt à propriétés non-corrosives, par Herbert T. Kalmus et K. B. Blake. 1917. 37p. 31 planches, 50 figures, tableaux. (Recherches sur le cobalt et ses alliages, faites à l'Université Queens, Kingston, Ontario, pour la Division des mines du ministère des Mines, 4^e partie.)

See report No. 411 for English edition. Voir aussi rapports No. 260, 310, 335 et 414.

Édition épuisée.

N° de cat. M32-412F

- 413.—Magnetic properties of cobalt and of Fe₂Co, by Herbert T. Kalmus and K. B. Blake. 1916. 18p. 1 pl., 13 figs., tables. (Researches on cobalt and cobalt alloys, conducted at Queen's University, Kingston, Ontario, for the Mines Branch of the Department of Mines, Part 5.)

Voir le rapport n° 414, pour l'édition française. See also reports No. 259, 309, 334 and 411.

35c.

Cat. No. M32-413

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 414.—**Les propriétés magnétiques du cobalt et du Fe_2Co** , par Herbert T. Kalmus et K. B. Blake. 1917. 19p. 1 planche, 13 figures, tableaux. (Recherches sur le cobalt et ses alliages, faites à l'Université Queens, de Kingston, Ontario, pour la Division des mines, du ministère des Mines, 5^e partie.)
See report No. 413 for English edition. Voir aussi rapports n^o 260, 310, 335 et 412.
Édition épuisée. N^o de cat. M32-414F
- 415.—**Rapport annuel de la production minérale au Canada durant l'année civile 1914**, par John McLeish. 1916. 360p. Tableaux.
See report No. 384 for English edition.
Édition épuisée. N^o de cat. M32-415F
- 416.—**Matawin iron range**, Thunder Bay district, Ontario; **magneto-metric map**, claims Nos. 215W to 223W inclusive, by A. H. A. Robinson. 1916. 400' : 1".
Accompanying report No. 217, Vol. 2.
35c. Cat. No. M32-416
- 417.—Not published.
- 418.—Not published.
- 419.—**The production of iron and steel in Canada during the calendar year 1915**, by John McLeish. 1916. 48p. Tables.
Advance chapter of report No. 426.
15c. Cat. No. M32-419
- 420.—**The production of coal and coke in Canada during the calendar year 1915**, by John McLeish. 1916. 42p. Tables.
Advance chapter of report No. 426.
15c. Cat. No. M32-420
- 421.—**Summary report of the Mines Branch of the Department of Mines for the calendar year ending December 31, 1915**. 1916. 213p. 13 pls., 3 figs., tables. (Sess. paper No. 26a-1916.)
Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL REPORTS:—*Metalliferous Division*: (1) Possibility of producing refined copper in Canada; (2) Antimony ores in Canada, by A. W. G. Wilson; (3) Investigation of iron ores, by A. H. A. Robinson:—*Non-metalliferous Division*: (1) Limestones of the province of Quebec, by Howells Fréchette; (2) Investigation of miscellaneous non-metallic minerals, by H. S. de Schmid; (3) Building and ornamental stones of Saskatchewan and Alberta, by W. A. Parks:—*Ore Dressing and Metallurgical Division*: (1) Progress report; and, (2) List of ores tested, by G. C. Mackenzie; (3) Descriptions of several mining properties and tests, by G. C. Mackenzie, W. B. Timm and C. S. Parsons:—*Fuels and Fuel Testing Division*: (1) Work at Fuel Testing Station, by B. F. Haanel; (2) Chemical laboratories of Fuel Testing Station, by E. Stansfield; (3) Investigation of peat bogs, by A. Anrep:—*Ceramic Division*: (1) Clay and shale resources; (2) Laboratory and equipment; (3) Testing of clays and shales, by J. Keele; (4) Clays of southern Saskatchewan, by N. B. Davis:—*Work done by the chemical laboratory, Division of Chemistry*, by F. G. Wait:—*Report of Division of Mineral Resources and Statistics*, by J. McLeish:—*Explosives Division*: (1) Mine accident at South Wellington, B.C.; (2) Explosion at the Reserve mine, Nanaimo, B.C., by J. G. S. Hudson.—**Appendix**: Preliminary report on the mineral production (see report No. 408).
Voir le rapport n^o 422 pour l'édition française.
35c. Cat. No. M32-421

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 422.—**Rapport sommaire de la Division des mines du ministère des Mines pour l'année terminée le 31 décembre 1915.** 1917. 225p. 13 planches, 3 diagrammes, tableaux. (Doc. parl. n° 26a-1916.)

Sommaire.—RAPPORT DU DIRECTEUR GÉNÉRAL, par Eugène Haanel.—RAPPORTS SOMMAIRES INDIVIDUELS:—*Division métallifère:* (1) Possibilité de produire du cuivre affiné au Canada; (2) Extraction des minerais d'antimoine, par A. H. A. Robinson:—*Division non-métallifère:* (1) Calcaires de la province de Québec, par Howells Fréchette; (2) Recherches sur les divers minéraux non métallifères, par H. S. de Schmidt; (3) Régions sablonneuses, Québec et Ontario, par L. H. Cole; (4) Sables bitumineux de l'Alberta septentrional; par S. C. Ellis; (5) Pierres de construction et d'ornementation, Saskatchewan et Alberta, par W. A. Parks:—*Division de la métallurgie et de la préparation mécanique:* (1) Rapport des opérations; (2) Liste des minerais dont on a fait l'essai, par G. C. Mackenzie; (3) Description de plusieurs propriétés minières et essais de minerais, par G. C. Mackenzie, W. B. Timm et C. S. Parsons:—*Services des combustibles:* (1) Travaux de la station d'essai, par B. F. Haanel; (2) Laboratoires chimiques de la station d'essai, par E. Stansfield; (3) Recherches sur les tourbières, par A. Anrep:—*Division de la céramique:* (1) Ressources en argile et en schistes; (2) Laboratoire et outillage; (3) Essais des argiles et des schistes, par Joseph Keele; (4) Gisements d'argile dans la Saskatchewan sud, par N. B. Davis:—*Travaux du laboratoire de chimie,* par G. F. Wait:—*Division des recherches minérales et des statistiques,* par John McLeish:—*Division des explosifs:* (1) Accident de mine à South Wellington, C.-B.; (2) Explosion à la mine de Réserve, C.-B., par J. G. S. Hudson.—**Annexe:** Rapport préliminaire sur la production des minéraux du Canada, durant l'année civile 1915, par John McLeish. See report No. 421 for English edition.

See report No. 421 for English edition.

Edition épuisée.

N° de cat. M32-422F

- 423.—**The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1915,** by John McLeish. 1916. 60p. Tables.

Advance chapter of report No. 426.

Out of print.

Cat. No. M32-423

- 424.—**A general summary of the mineral production of Canada during the calendar year 1915,** by John McLeish. 1916. 45p. Tables.

Advance chapter of report No. 426.

Out of print.

Cat. No. M32-424

- 425.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1915,** 1916. 82p. Tables.

Advance chapter of report No. 426.

Out of print.

Cat. No. M32-425

- 426.—**Annual report on the mineral production of Canada during the calendar year 1915,** by John McLeish. 1917. 364p. Tables.

Voir le rapport n° 427 pour l'édition française. See separates No. 419, 420, 423, 424 and 425.

25c.

Cat. No. M32-426

- 427.—**Rapport annuel de la production minérale au Canada durant l'année civile 1915,** par John McLeish. 1917. 352p. Tableaux.

See report No. 426 for English edition.

Edition épuisée.

N° de cat. M32-427F

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Reports and maps—Rapports.—*Continued—Suite.*

- 428.—**Report on the production of spelter in Canada, 1916**, by Alfred W. G. Wilson. 1916. 60p. Tables.
25c. *Cat. No. M32-428*
- 429.—Not published.
- 430.—**The coal-fields and coal industry of Eastern Canada; a general survey and description**, by Francis W. Gray. 1917. 67p. 27 pls., 1 fig., 1 map in pocket. (Bulletin No. 14.)
See map No. 434.
35c. *Cat. No. M32-430*
- 431.—Not published.
- 432.—**The mining of thin-coal seams as applied to the eastern coal-fields of Canada**, by J. F. Kellock Brown. 1917. 132p. 1 pl., 61 figs., 1 map in pocket. (Bulletin No. 15.)
See map No. 434.
75c. *Cat. No. M32-432*
- 433.—Not published.
- 434.—**Coal-fields of Nova Scotia and New Brunswick; index map**, by D. B. Browning. 1916. 35m : 1".
Accompanying reports No. 430 and 432.
Out of print. *Cat. No. M32-434*
- 435.—**Mineral springs of Canada. Part 1: The radioactivity of some Canadian mineral springs**, by J. Satterly and R. T. Elworthy. 1917. 60p. 23 pls., 5 figs., 1 map. (Bulletin No. 16.)
See map No. 437.
25c. *Cat. No. M32-435*
- 436.—Not published.
- 437.—**Mineral springs of Ontario and Quebec; index map**. 1917. 40m : 1".
Accompanying report No. 435.
35c. *Cat. No. M32-437*
- 438.—**Western Steel Iron claim at Sechart, Vancouver Island, B.C.; magnetometric map**, by E. Lindeman. 1917. 60' : 1".
Accompanying report No. 217, Vol. 2.
35c. *Cat. No. M32-438*
- 439.—**Baldwin mine, Hull township, Quebec; magnetometric map**, by E. Nystrom. 1917. 100' : 1".
Accompanying report No. 217, Vol. 2.
Out of print. *Cat. No. M32-439*
- 440.—**Standard specifications for the printing of Mines Branch reports, monographs, bulletins, etc. Part I: Specifications. Part II: Models**. 1916. 2 vol.
Out of print. *Cat. No. M32-440*

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Reports and maps—Rapports.—*Continued—Suite.*

- 441.—**Wilbur mine**, Lavant township, Lanark county, Ontario; **magnetometric map**, by B. F. Haanel. 1917. 100' : 1".
Accompanying report No. 217, vol. 2.

35c.

Cat. No. M32-441

- 442.—**Iron Crown claim**, Nimpkish river, Vancouver Island, B.C.; **magnetometric map**, by E. Lindeman. 1917. 100' : 1".
Accompanying report No. 217, vol. 2.

35c.

Cat. No. M32-442

- 443.—**Bristol mine**, Pontiac county, Quebec; **magnetometric map**, by E. Lindeman. 1917. 200' : 1".
Accompanying report No. 217, Vol. 1.

35c.

Cat. No. M32-443

- 444.—**Northeast Arm Iron range**, lots Nos. E.T.W. 340, W.D. 341, W.D. 342, W.D. 343, and W.D. 351, Lake Timagami, Nipissing district, Ontario; **magnetometric map**, by E. Lindeman. 1917. 200' : 1".
Accompanying report No. 217, vol. 2.

35c.

Cat. No. M32-444

- 445.—**Dominion of Canada and Newfoundland; map showing iron ore occurrences and blast furnaces**, by E. Lindeman and L. L. Bolton, 1917. 100m : 1".

Accompanying report No. 217, Vol. 1 and 217, Vol. 2.

35c.

Cat. No. M32-445

- 446.—**Radenhurst and Caldwell mines**, Lanark county, Ont.; **magnetometric map**, by A. H. A. Robinson. 1917. 200' : 1".

Accompanying report No. 217, vol. 2.

35c.

Cat. No. M32-446

- 447.—**The value of peat fuel for the generation of steam**, by John Blizzard. 1917. 42p. 1 pl., 5 figs., 6 charts, tables. (Bulletin No. 17.)

15c.

Cat. No. M32-447

- 448.—Not published.

- 449.—**Preliminary report of the mineral production of Canada during the calendar year 1916**, by John McLeish. 1917. 25p. Tables.

Part of report No. 454.

Out of print.

Cat. No. M32-449

- 450.—Not published.

- 451.—Not published.

- 452.—**Report on the building and ornamental stones of Canada; Vol. V: British Columbia**, by W. A. Parks. 1917. 236p. 47 pls., 3 figs. tables.

See also reports No. 100, 203, 279 and 388.

75c.

Cat. No. M32-452

- 453.—Not published.

Reports and maps—Rapports.—Continued—Suite.

- 454.—Summary report of the Mines Branch of the Department of Mines for the calendar year ending December 31, 1916. 1917. 183p. 14 pls., 10 figs., tables. (Sess. paper No. 26a-1917.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL REPORTS:—*Metalliferous Division*: (1) Iron ores, by A. H. A. Robinson:—*Non-metalliferous Division*: (1) Separation of lime from Grenville magnesite, by Howells Fréchette; (2) Phosphate in the Rocky Mountains, and graphite near Cranbrook, B.C., by H. S. de Schmid; (3) Sands and sandstones of Canada; and (4) Occurrence and testing foundry moulding sands (see report No. 476), by L. H. Cole; (5) Bituminous sands of northern Alberta, by S. C. Ells; (6) Building and ornamental stones of British Columbia, by W. A. Parks:—*Fuels and Fuel Testing Division*: (1) Work at the Fuel Testing Station, by B. F. Haanel; (2) Chemical laboratories, by E. Stansfield; (3) Specifications for the purchase of oil, by E. Stansfield and Victor F. Murray; (4) The Hoffman potash test, by J. H. H. Nicolls; (5) Errors caused by the erosion of an iron ball mill, by R. C. Cantelo; (6) Oil-burette for fractional distillation and specific gravity determination; (7) Nitrogen distillation apparatus, by Victor F. Murray; (8) Investigation of peat bogs, by A. Anrep; *Mechanical work done at Fuel Testing Station*, by A. W. Mantle:—*Ore Dressing and Metallurgical Division*: (1) Progress report, by G. C. Mackenzie; (2) Chemical laboratory, by H. C. Mabée:—*Ceramic Division*: (1) Clay and clay resources; (2) Apatite: a substitute for bone ash in the manufacture of bone china; (3) Refractory materials in Canada; (4) Tests on clays and shales from Pembina mountains in southern Manitoba, by Joseph Keele; (5) Clay investigation in southern Saskatchewan, by N. B. Davis:—*Chemical laboratory of the Division of Chemistry*, by F. G. Wait:—*Division of Mineral Resources and Statistics*: (1) Mineral resources and statistics, by John McLeish; (2) Field work, by A. Buisson.—**Appendix**: Preliminary report on the mineral production (see report No. 449).

Voir le rapport n^o 455 pour l'édition française.

35c.

Cat. No. M32-454

- 455.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile terminée le 31 décembre 1916. 1918. 188p. 14 planches, 10 figures, tableaux. (Doc. parl. n^o 26a-1917.)

Sommaire.—RAPPORT DU DIRECTEUR GÉNÉRAL, par Eugène Haanel.—RAPPORTS INDIVIDUELS:—*Section des mines métalliques*: (1) Les minerais de fer, par A. H. A. Robinson:—*Section des mines non-métallifères*: (1) Séparation de la chaux d'avec la magnésite de Grenville, par Howells Fréchette; (2) Phosphate dans les montagnes Rocheuses, et graphite près de Cranbrook, C.-B., par H. S. de Schmid; (3) Sables et grès du Canada; (4) Gisements et essais des sables de moulage pour fonderies, par L. H. Cole; (5) Sables bitumineux du nord de l'Alberta, par S. C. Ells; (6) Pierres de construction et d'ornement du Canada, par W. A. Parks:—*Section des combustibles*: (1) Travaux à la station des combustibles, par B. F. Haanel; (2) Laboratoire de chimie, par E. Stansfield; (3) Cahier des charges pour l'achat des huiles, par E. Stansfield et V. Murray; (4) L'essai à la potasse, de Hoffman, par J. H. H. Nicolls; (5) Erreurs causées par l'érosion d'un broyeur à boulets de fer, par R. C. Cantelo; (6) Burette à l'huile pour la distillation fractionnée et la détermination du poids spécifique; (7) Appareil pour la distillation de l'azote, par Victor F. Murray; (8) Enquêtes sur les tourbières, par A. Anrep:—*Section de la préparation mécanique et de la métallurgie*: (1) Rapport des opérations, par G. C. Mackenzie; (2) Laboratoire de chimie, par H. G. Mabée:—*Section de la céramique*: (1) Enquête sur l'argile et les ressources en argile; (2) Apatite comme succédané de la cendre d'os dans la fabrication de la porcelaine; (3) Matières réfractaires au Canada; (4) Essais d'argiles et de schistes des monts Pembina dans le Manitoba méridional, par Joseph Keele; (5) Argile dans le Saskatchewan méridional, par N. B. Davis:—*Rapport sur les travaux du laboratoire de chimie*, par F. G. Wait:—*Section des ressources minières et de la statistique*: (1) Ressources minières et

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Reports and maps—Rapports.—Continued—Suite.

455.—Rapport sommaire, 1916.—Suite.

statistiques, par John McLeish; (2) Travail sur le terrain, par A. Buisson:—Appendices: Rapport préliminaire sur la production minière du Canada, 1916, par John McLeish.

See report No. 454 for English edition.

Édition épuisée.

N^o de cat. M32-455F

456.—Not published.

457.—Not published.

458.—The production of iron and steel in Canada during the calendar year 1916, by John McLeish. 1917. 50p. Tables.

Advance chapter of report No. 474.

Out of print.

Cat. No. M32-458

459.—Moose Creek peat bog, Prescott, Russell and Stormont counties, Ontario; map, by A. Anrep. 1918. 3800' : 1".

Out of print.

Cat. No. M32-459

460.—Westmeath peat bog, Renfrew county, Ont.; map, by A. Anrep. 1917. 3100' : 1".

Out of print.

Cat. No. M32-460

461.—Meath peat bog, Renfrew county, Ont.; map, by A. Anrep. 1918. 2700' : 1".

Out of print.

Cat. No. M32-461

462.—Farnham peat bog, Missisquoi and Iberville counties, Que.; map, by A. Anrep. 1917. 5000' : 1".

35c.

Cat. No. M32-462

463.—Canrobert peat bog, Rouville county, Que.; map, by A. Anrep. 1921. 3500' : 1".

35c.

Cat. No. M32-463

464.—Napierville peat bog, Napierville county, Que.; map, by A. Anrep. 1918. 4000' : 1".

35c.

Cat. No. M32-464

465.—The production of coal and coke in Canada during the calendar year 1916, by John McLeish. 1917. 46p. Tables.

Advance chapter of report No. 474.

15c.

Cat. No. M32-465

466.—Test of some Canadian sandstones to determine their suitability as pulpstones, by L. Heber Cole. 1917. 17p. 6 pls., 4 figs., tables. (Bulletin No. 19.)

25c.

Cat. No. M32-466

467.—Not published.

468.—Report on the clay resources of southern Saskatchewan, by N. B. Davis. 1918. 93p. 21 pls., 1 fig., 2 maps.

See maps No. 468A and 469.

Out of print.

Cat. No. M32-468

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Reports and maps—Rapports.—*Continued—Suite.*

- 468A.—**Southern Saskatchewan; geological map**, by N. B. Davis. 1917. 35m : 1".
Accompanying report No. 468.
Out of print. *Cat. No. M32-468A*
- 469.—**Cypress Hills, Southern Saskatchewan; map**, showing outcrops of the Whitemud clays, near Eastend, by N. B. Davis. 1917. 1½m : 1".
Accompanying report No. 468.
35c. *Cat. No. M32-469*
- 470.—**The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1916.** 1917. 61p. Tables.
Advance chapter of report No. 474.
Out of print. *Cat. No. M32-470*
- 471.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1916.** 1917. 76p. Tables.
Advance chapter of report No. 474.
Out of print. *Cat. No. M32-471*
- 472.—**Mineral springs of Canada; Part II: The chemical character of some Canadian mineral springs**, by R. T. Elworthy. 1918. 173p. 10 pls., 2 figs. (Bulletin No. 20.)
See also report No. 435.
Out of print. *Cat. No. M32-472*
- 473.—Not published.
- 474.—**Annual report on the mineral production of Canada during the calendar year 1916**, by John McLeish. 1918. 343p. Tables.
Voir le rapport n° 475 pour l'édition française. See separates No. 458, 465, 470, and 471.
75c. *Cat. No. M32-474*
- 475.—**Rapport annuel de la production minérale au Canada durant l'année 1916**, par John McLeish. 1918. 335p. Tableaux.
See report No. 474 for English edition.
Édition épuisée. *N° de cat. M32-475F*
- 476.—**Occurrence and testing of foundry moulding sands**, by L. Heber Cole. 1917. 17p. 3 pls., 2 figs., tables. (Bulletin No. 21.)
Reprinted from report No. 454.
Out of print. *Cat. No. M32-476*
- 477.—**Peat bogs investigated in Ontario; index map**, by A. Anrep. 1918. 35m : 1".
Out of print. *Cat. No. M32-477*
- 478.—**Preliminary report on the mineral production of Canada during the calendar year 1917**, by John McLeish. 1918. 20p. Tables.
Out of print. *Cat. No. M32-478*

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Reports and maps—Rapports.—*Continued—Suite.*

- 479.—**Analyses of Canadian fuels. Part I: Maritime Provinces**, by Edgar Stansfield and J. H. H. Nicolls. 1918. 28p. Tables. (Bulletin No. 22.)
Out of print. *Cat. No. M32-479*
- 480.—**Analyses of Canadian fuels. Part II: Quebec and Ontario**, by Edgar Stansfield and J. H. H. Nicolls. 1918. 25p. Tables. (Bulletin No. 23.)
25c. *Cat. No. M32-480*
- 481.—**Analyses of Canadian fuels. Part III: Manitoba and Saskatchewan**, by Edgar Stansfield and J. H. H. Nicolls. 1918. 15p. Tables. (Bulletin No. 24.)
Out of print. *Cat. No. M32-481*
- 482.—**Analyses of Canadian fuels. Part IV: Alberta and Northwest Territories**, by Edgar Stansfield and J. H. H. Nicolls. 2nd edition. 1922. 77p. Tables. (Bulletin No. 25. First edition, 1918, Second edition, 1921.)
25c. *Cat. No. M32-482*
- 483.—**Analyses of Canadian fuels. Part V: British Columbia and Yukon Territory**, by Edgar Stansfield and J. H. H. Nicolls. 1918. 24p. Tables. (Bulletin No. 26.)
25c. *Cat. No. M32-483*
- 484.—**Peat bogs investigated in Quebec; index map**, by A. Anrep. 1918. 35m : 1".
Out of print. *Cat. No. M32-484*
- 485.—**Girard peat bog**, St. Johns and Napierville counties, Quebec; **map**, by A. Anrep. 1918. 3700' : 1".
Out of print. *Cat. No. M32-485*
- 486.—**Pont Rouge peat bog**, Portneuf county, Quebec; **map**, by A. Anrep. 1918. 500' : 1".
Out of print. *Cat. No. M32-486*
- 487.—**Peat bogs investigated in New Brunswick; index map**, by A. Anrep. 1918. 35m : 1".
Out of print. *Cat. No. M32-487*
- 488.—**St. Stephen peat bog**, Charlotte county, N.B.; **map**, by A. Anrep. 1918. 800' : 1".
Out of print. *Cat. No. M32-488*
- 489.—**Hyman peat bog**, New Brunswick; **map**, by A. Anrep. 1918. 500' : 1".
Out of print. *Cat. No. M32-489*
- 490.—**Seely Cove peat bog**, Charlotte county, N.B.; **map**, by A. Anrep. 1918. 1000' : 1".
Out of print. *Cat. No. M32-490*

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 491.—Pocologan peat bog, Charlotte county, N.B.; map, by A. Anrep.
1918. 1180' : 1''.

Out of print.

Cat. No. M32-491

- 492.—Musquash peag bog, St. John county, N.B.; map, by A. Anrep.
1918. 1780' : 1''.

Out of print.

Cat. No. M32-492

- 493.—Summary report of the Mines Branch of the Department of Mines for the calendar year ending December 31, 1917. 1918. 153p. 4 figs., tables. (Sess. paper No. 26a-1918.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL SUMMARY REPORTS:—*Metalliferous Mines Division*: (1) *Iron ores in Rainy River district* by A. H. A. Robinson:—*Non-metalliferous Mines Division*: (1) *Limestones of Ontario* by Howells Fréchette; (2) *The Canadian graphite industry*, by H. S. Spence; (3) *Investigation of certain sand and sandstone deposits*, by L. H. Cole:—*Fuels and Fuel Testing Division*: (1) *Work at the Fuel Testing Station*, by B. F. Haanel; (2) *Chemical laboratories*, by E. Stansfield; (3) *Investigation of peat bogs*, by A. Anrep:—*Ore Dressing and Metallurgical Division*: (1) *Progress report*, by G. C. Mackenzie; (2) *Ores tested and reports thereon*, by W. B. Timm and C. S. Parsons; (3) *Chemical laboratory*, by H. C. Mabee:—*Ceramic Division*: (1) *Investigation of clay and shale resources*; (2) *Pottery clays*; (3) *Magnesite*; (4) *Silica*, by J. Keele:—*Road Materials Division*: (1) *Tests of samples of bedrock*; (2) *Road Materials Laboratories*; (3) *Investigational work on the sampling and testing of bedrock*; (4) *Sampling and testing of fieldstone*; (5) *Special tests of bedrock collected from the quarries in Montreal*, by K. A. Clark:—*Work of Division of Chemistry*, by F. G. Wait:—*Report of Division of Mineral Resources and Statistics*, by John McLeish.

Voir le rapport n° 494 pour l'édition française.

35c.

Cat. No. M32-493

- 494.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile terminée le 31 décembre 1917. 1919. 157p. 4 figures, tableaux. (Doc. parl. n° 26a-1918.)

Sommaire.—RAPPORT DU DIRECTEUR GÉNÉRAL, par E. Haanel.—RAPPORTS SOMMAIRES INDIVIDUELS.—*Section des mines métallifères*: (1) *Minerais de fer du district de Rainy River*, par A. H. A. Robinson:—*Section des mines non-métallifères*: (1) *Calcaires de l'Ontario*, par Howells Fréchette; (2) *L'industrie du graphite au Canada*, par H. S. Spence; (3) *Recherches sur certains gisements de sables et grès*, par L. H. Cole:—*Section des combustibles*: (1) *Travaux à la station d'essai des combustibles*, par B. F. Haanel; (2) *Laboratoire de chimie*, par E. Stansfield; (3) *Recherches sur les tourbières*, par A. Anrep:—*Section de préparation du minerai et de métallurgie*: (1) *Rapport des opérations*, par G. C. Mackenzie; (2) *Minerais essayés et rapports sur les essais*, par W. B. Timm, et C. S. Parsons; (3) *Laboratoire de chimie*, par H. C. Mabee:—*Section de la céramique*: (1) *Resources en argiles et schistes*; (2) *Argiles à poterie*; (3) *Magnésite*; (4) *Silice*, par J. Keele:—*Section des matériaux de voirie*: (1) *Essais d'échantillons de roche massive*; (2) *Laboratoires de matériaux de voirie*; (3) *Travaux de recherches sur l'échantillonnage et l'essai de roche massive*; (4) *Échantillonnage et essai de pierre des champs*; (5) *Essais de roche massive provenant des carrières de la ville de Montréal*, par K. A. Clark:—*Travaux de laboratoire de la Section de la chimie*, par F. G. Wait:—*Rapport sur les travaux de la Section des ressources minérales et des statistiques*, par J. McLeish.

See report No. 493 for English edition.

Édition épuisée.

N° de cat. M32-494F

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

495.—Not published.

496.—**Results of forty-one steaming tests conducted at the Fuel Testing Station, Ottawa**, by John Blizard and E. S. Malloch. 1920. 83p. 11 figs., 41 charts, tables. (Bulletin No. 27.)
25c. *Cat. No. M32-496*

497.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1917.** 1919. 71p. Tables.
Advance chapter of report No. 504.
Out of print. *Cat. No. M32-497*

498.—**The production of iron and steel in Canada during the calendar year 1917**, by John McLeish. 1919. 32p. Tables.
Advance chapter of report No. 504.
Out of print. *Cat. No. M32-498*

499.—**General summary of the mineral production of Canada during the calendar year 1917**, by John McLeish. 1919. 27p. Tables.
Advance chapter of report No. 504.
Out of print. *Cat. No. M32-499*

500.—**The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1917.** 1919. 44p. Tables.
Advance chapter of report No. 504.
Out of print. *Cat. No. M32-500*

501.—**The production of coal and coke in Canada during the calendar year 1917**, by John McLeish. 1919. 39p. Tables.
Advance chapter of report No. 504.
15c. *Cat. No. M32-501*

502.—**The economic use of coal for steam-raising and house heating**, by John Blizard. 1919. 21p. (Bulletin No. 28.)
25c. *Cat. No. M32-502*

503.—Not published.

504.—**Annual report on the mineral production of Canada during the calendar year 1917**, by John McLeish. 1919. 258p. Tables.
Voir le rapport n^o 505 pour l'édition française. See separates No. 497, 498, 499, 500 and 501.
Out of print. *Cat. No. M32-504*

505.—**Rapport annuel de la production minérale du Canada durant l'année civile 1917**, par John McLeish. 1919. 260p. Tableaux.
See report No. 504 for English edition.
Édition épuisée. *N^o de cat. M32-505 F*

506.—**Preliminary report on the mineral production of Canada during the calendar year 1918**, by John McLeish. 1919. 24p. Tables.
15c. *Cat. No. M32-506*

Reports and maps—Rapports.—*Continued—Suite.*

- 507.—Potash recovery of cement plants, by Alfred W. G. Wilson.
1919. 34p. 10 pls., tables. (Bulletin No. 29.)
35c. Cat. No. M32-507

508.—Not published.

- 509.—Summary report of the Mining Branch of the Department of Mines for the calendar year ending December 31, 1918. 1920. 225p. 6 figs., 9 diagrams, tables. (Sess. paper No. 26a-1919.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL SUMMARY REPORTS:—*Metalliferous Mines Division:* (1) Investigation of pyrites resources, by A. H. A. Robinson:—*Non-Metalliferous Mines Division:* (1) Limestones of Ontario and Quebec, by Howells Fréchette; (2) Graphite and the graphite industry; (3) Mica for condenser plates, by H. S. Spence; (4) Silica and moulding sand deposits of eastern Canada; (5) Building stones of Wolfe River district; (6) Discovery of rock salt at Malagash, Nova Scotia, by L. H. Cole:—*Fuels and Fuel Testing Division:* (1) Work at the Fuel Testing Station; (2) Test of New Brunswick oil shales in the Wallace retort, by B. F. Haanel; (3) Chemical laboratories, by E. Stansfield; (4) Lignite carbonization, by E. Stansfield and R. E. Gilmore; (5) Mechanical work, by A. W. Mantle:—*Ore Dressing and Metallurgical Division:* (1) Progress report, by G. C. Mackenzie; (2) List of ores tested and reports thereon, by W. B. Timm and C. S. Parsons; (3) Work of chemical laboratory, by H. C. Mabee:—*Ceramic Division:* (1) Clay and shale resources of British Columbia, and of eastern and northern Ontario, by J. Keele:—*Road Materials Division:* (1) Tests on bedrock, gravel, soil samples, and weathered rock, by K. A. Clark; (2) Alberta bituminous sands for rural roads, by G. C. Parker:—*Work of Division of Chemistry,* by F. G. Wait:—*Report of Division of Mineral Resources and Statistics,* by John McLeish.

Voir le rapport n° 510 pour l'édition française.

Out of print.

Cat. No. M32-509

- 510.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile terminée le 31 décembre 1918. 1920. 235p. 6 figures, 9 diagrammes, tableaux. (Doc. parl. n° 26a-1919.)

Sommaire.—RAPPORT DU DIRECTEUR GÉNÉRAL, par Eugene Haanel.—RAPPORTS SOMMAIRES INDIVIDUELS:—*Section des mines métallifères:* (1) Recherches sur les ressources de pyrites, par A. H. A. Robinson:—*Section des mines non-métallifères:* (1) Calcaires des provinces d'Ontario et de Québec, par Howells Fréchette; (2) Graphite et l'industrie du graphite; (3) Mica pour plaques de condensateurs, par H. S. Spence; (4) Gisements de silice et de sable de moulage de l'est du Canada; (5) Pierre de construction dans le district de Wolfe River; (6) Découverte de sel gemme à Malagash, Nouvelle-Écosse, par L. H. Cole:—*Section des combustibles:* (1) Travaux de la section; (2) Essai exécuté sur les schistes bitumineux du Nouveau-Brunswick au moyen de la cornue Wallace, par B. F. Haanel; (3) Laboratoires de chimie de la station d'essai, par E. Stansfield; (4) Carbonisation du lignite, par E. Stansfield et R. E. Gilmore; (5) Rapport des travaux mécaniques, par A. W. Mantle:—*Section de préparation mécanique et de métallurgie:* (1) Rapport des opérations, par G. C. Mackenzie; (2) Minerais essayés et rapports à leur sujet, par W. B. Timm and C. S. Parsons; (3) Rapport du laboratoire de chimie, par H. C. Mabee:—*Section de la céramique:* (1) Ressources en argile et schistes de la Colombie-Britannique, de l'est et du nord de l'Ontario, par J. Keele:—*Section des matériaux de voirie:* (1) Essais de roches de fond de graviers, d'échantillons de sols et de roche altérées, par K. A. Clark; (2) Sables bitumineux de l'Alberta pour les routes rurales, par G. C. Parker:—*Rapport sur les travaux de laboratoire de la Section de la chimie,* par F. G. Wait:—*Rapport sur les travaux de la Section des ressources minérales et des statistiques,* par J. McLeish.

See report No. 509 for English edition.

Édition épuisée.

N° de cat. M32-510F

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 511.—**Graphite**, by Hugh S. Spence. 1920. 202p. 56 pls., 43 figs., tables, 6 maps.
Voir le rapport n^o 512 pour l'édition française. See maps No. 513, 514, 515, 516, 517, and 518.
35c. *Cat. No. M32-511*
- 512.—**Le graphite**, par Hugh S. Spence. 1912. 212p. 56 planches, 43 figures, tableaux, 6 cartes.
See report No. 511 for English edition.
Édition épuisée. *N^o de cat. M32-512F*
- 513.—**Graphite occurrences in Bedford, Loughborough, Burgess, and Elmsley townships, Ontario; index map**, by H. S. Spence. 1919. 3.95m : 1".
Accompanying report No. 511.
Out of print. *Cat. No. M32-513*
- 514.—**Graphite occurrences in Monmouth, Cardiff, Monteagle, and Dungannon townships, Ontario; index map**, by H. S. Spence. 1919. 3.95m : 1".
Accompanying report No. 511.
Out of print. *Cat. No. M32-514*
- 515.—**Graphite occurrences in Brougham and Blithfield townships, Ontario; index map**, by H. S. Spence. 1919. 3.95m : 1".
Accompanying report No. 511.
Out of print. *Cat. No. M32-515*
- 516.—**Graphite occurrences in Grenville and Wentworth townships, Quebec; index map**, by H. S. Spence. 1919. 3.95m : 1".
Accompanying report No. 511.
Out of print. *Cat. No. M32-516*
- 517.—**Graphite occurrences in Amherst township, Quebec; index map**, by H. S. Spence. 1919. 3.95m : 1".
Accompanying report No. 511.
Out of print. *Cat. No. M32-517*
- 518.—**Graphite occurrences in Buckingham, and Lockaber townships, Quebec; index map**, by H. S. Spence. 1919. 3.95m : 1".
Accompanying report No. 511.
Out of print. *Cat. No. M32-518*
- 519.—**Smelter treatment rates**. Report of the Committee of Investigation in the matter of tolls charged by the Consolidated Mining & Smelting Company of Canada, Limited, at Trail, British Columbia, June, 1919, by Samuel S. Fowler, Chairman. 1919. 45p. 8 figs., tables. (Bulletin No. 30.)
Appendix: Schedule "C": Lead ores, 1919.
35c. *Cat. No. M32-519*
- 520.—**Annual report on the mineral production of Canada during the calendar year 1918**, by John McLeish. 1919. 80p. Tables.
Voir le rapport n^o 521 pour l'édition française.
25c. *Cat. No. M32-520*

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—*Continued—Suite.*

- 521.—**Rapport annuel de la production minérale du Canada durant l'année civile 1918**, par John McLeish. 1920. 80p. Tableaux.

See report 520 for English edition.

Édition épuisée.

N^o de cat. M32-521F

- 522.—**Report on some sources of helium in the British Empire**, by J. C. McLennan and others. 1920. 72p. 1 pl., 20 figs., tables, 4 maps. (Bulletin No. 31.)

Appendix: *Gas density balance.*

See maps No. 523, 524, 525, 526.

25c.

Cat. No. M32-522

- 523.—**Gas and oil fields and pipe lines in southwestern Ontario; map**, by J. C. McLennan. 1919. 19m : 1".

Accompanying report No. 522.

Out of print.

Cat. No. M32-523

- 524.—**Petroleum, natural gas and bituminous sands in Western Canada (occurrences); map**, by J. C. McLennan. 1919. 200m : 1".

Accompanying report No. 522.

Out of print.

Cat. No. M32-524

- 525.—**Main gas line, Bow island—Calgary, Alberta; map**, by J. C. McLennan. 1919. 12½m : 1".

Accompanying report No. 522.

Out of print.

Cat. No. M32-525

- 526.—**Natural gas wells in British Columbia; index map**, by J. C. McLennan. 35m : 1".

Accompanying report No. 522.

Out of print.

Cat. No. M32-526

- 527.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1918**, by John McLeish. 1919. 74p. Tables.

Out of print.

Cat. No. M32-527

- 528.—**The production of coal and coke in Canada during the calendar year 1918**, by John McLeish. 1919. 40p. Tables.

Out of print.

Cat. No. M32-528

- 529.—**The production of iron and steel in Canada during the calendar year 1918**, by John McLeish. 1920. 36p. Tables.

Out of print.

Cat. No. M32-529

- 530.—**Report on road materials along the St. Lawrence river**, from the Quebec boundary line to Cardinal, Ontario, by R. H. Picher. 1920. 65p. 6 pls., tables, 1 map. (Bulletin No. 32.)

Appendices: (1) *Rock outcrops.*—(2) *Character of boulder deposits of field stone.*—(3) *Character of gravel deposits.*—(4) *Commercial development of gravel deposits.*

See map No. 532.

35c.

Cat. No. M32-530

- 531.—Not published.

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 532.—Deposits of stone and gravel available for highway construction between Cardinal, Ontario, and the Quebec boundary; index map, by R. H. Picher. 1920. 2m : 1".

Accompanying report No. 530.

35c.

Cat. No. M32-532

- 533.—Preliminary report of the mineral production of Canada during the calendar year 1919, by John McLeish. 1920. 24p. Tables.
Out of print.

Cat. No. M32-533

534.—Not published.

535.—Not published.

536.—Not published.

537.—Not published.

538.—Not published.

539.—Not published.

540.—Not published.

541.—Not published.

- 542.—Summary report of the Mines Branch of the Department of Mines for the calendar year ending December 31, 1919. 1920. 182p. 2 figs., 5 diagrams, tables. (Sess. Paper No. 26a-1920.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL SUMMARY REPORTS:—*Metalliferous Mines Division:* (1) Progress report, by A. W. G. Wilson; (2) Iron ore deposits in northern Ontario, by A. H. A. Robinson:—*Non-metalliferous Division:* (1) Iron oxide pigments in the province of Quebec, by Howells Fréchette; (2) Investigations of miscellaneous non-metallic minerals by H. S. Spence:—*Fuels and Fuel Testing Division:* (1) Fuel Testing Station, by B. F. Haanel; (2) Chemical laboratories, by E. Stansfield; (3) Lignite carbonization, by E. Stansfield and others; (4) Peat Committee for year ending December 31, 1919, by B. F. Haanel:—*Ore Dressing and Metallurgical Division:* (1) Progress report, by W. B. Timm; (2) List of ores tested, and detailed particulars of concentration and separation tests, by W. B. Timm and R. K. Carnochan; (3) Chemical laboratory, by H. C. Mabey:—*Ceramic Division:* (1) Residual clays in B.C.; (2) Clays and shales in vicinity of Fort William and Port Arthur; (3) Kaolin in Gatineau valley, by J. Keele; (4) Aluminum and its sources, by R. T. Elworthy; (5) Structural materials in Dundas, Stormont, and Glengarry counties, by J. Keele and L. H. Cole; (6) Pottery clays, by M. E. Young:—*Road Materials Division:* (1) Road materials and soil conditions in the area between Winnipeg and Brandon, Manitoba; (2) Road materials in Rocky Mountains Park, Alberta, by K. A. Clark; (3) Road materials investigation in Chateaugay and Beauharnois counties, Quebec, by H. Gauthier.

Voir le rapport n° 543 pour l'édition française.

Out of print.

Cat. No. M32-542

- 543.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile terminée le 31 décembre 1919. 1921. 194p. 2 figures, 5 diagrammes, tableaux. (Doc. parl. n° 26a-1920.)

Sommaire.—RAPPORT DU DIRECTEUR GÉNÉRAL, par Eugène Haanel.—RAPPORTS SOMMAIRES INDIVIDUELS:—*Section des mines métallifères:* (1) Exposé général des travaux, par A. W. G. Wilson; (2) Gisements de minerai de fer dans le nord de l'Ontario, par A. H. A. Robinson:—*Section des mines non-métalliques:* (1) Cou-

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Reports and maps—Rapports.—Continued—Suite.

543.—Rapport sommaire, 1913.—Suite.

leurs d'oxyde de fer dans la province de Québec, par Howells Fréchette; (2) Recherches sur divers minéraux non-métalliques, par H. S. Spence:—Section des combustibles: (1) Travaux de la station d'essai des combustibles, par B. F. Haanel; (2) Laboratoires de chimie, par E. Stansfield; (3) Carbonisation du lignite, par E. Stansfield et R. E. Gilmore; (4) Commission de la tourbe pour l'année 1919, par B. F. Haanel:—Section de préparation mécanique et de métallurgie: (1) Rapport des opérations, par W. B. Timm; (2) Minerais essayés et rapports s'y rapportant, par W. B. Timm and R. K. Carnochan; (3) Laboratoire de chimie, par H. C. Mabee:—Section de la céramique: (1) Argiles détritiques en Colombie-Britannique; (2) Argiles et schistes au voisinage de Fort William et de Port Arthur; (3) Le kaolin dans la vallée de la Gatineau, Québec, par J. Keele; (4) L'aluminium et les sources de ce métal, par R. T. Elworthy; (5) Matériaux de construction dans les comtés de Dundas, Stormont, et Glengarry, Ontario, par J. Keele et L. H. Cole; (6) Argiles à poterie, par M. E. Young:—Section des matériaux de voirie: (1) Matériaux de voirie et état des terrains dans la région entre Winnipeg et Brandon, Manitoba; (2) Matériaux de voirie dans le Rocky Mountains Park, Alberta, par K. A. Clark; (3) Matériaux de voirie dans les comtés de Chateauguay et de Beauharnois, Québec, par H. Gauthier.

See report No. 542 for English edition.

Édition épuisée.

N^o de cat. M32-543F

544.—The production of iron and steel in Canada during the calendar year 1919, by John McLeish. 1920. 45p. Tables.

25c.

Cat. No. M32-544

545.—Annual report on the mineral production of Canada during the calendar year 1919, by John McLeish. 1920. 82p. Tables.

Voir le rapport n^o 546 pour l'édition française.

25c.

Cat. No. M32-545

546.—Rapport annuel de la production minérale du Canada durant l'année civile 1919, par John McLeish. 1921. 82p. Tableaux.

See report No. 545 for English edition.

Édition épuisée.

N^o de cat. M32-546F

547.—The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1919, by John McLeish. 1921. 76p. Tables.

Out of print.

Cat. No. M32-547

548.—The production of coal and coke in Canada during the calendar year 1919, by John McLeish. 1921. 39p. Tables.

15c.

Cat. No. M32-548

549.—Report on structural materials along the St. Lawrence river between Prescott, Ontario, and Lachine, Quebec, by Joseph Keele and L. Heber Cole. 1922. 119p. 30 pls., 5 figs., 3 maps.

Appendices.—“A” Pleistocene and recent fossils of the St. Lawrence valley, from Prescott to Beauharnois, by E. J. Whittaker.—“B” Ordovician fossils from St. Lawrence canal system localities, Ontario and Quebec, collected by L. H. Cole and J. Keele, identified by Alice E. Wilson.

Voir le rapport n^o 550 pour l'édition française. See maps No. 551, 552, and 553.

35c.

Cat. No. M32-549

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 550.—**Rapport sur les matériaux de construction le long du fleuve St-Laurent, entre Prescott, Ont. et Lachine, Qué.,** par Joseph Keele et L. Heber Cole. 1924. 135p. 30 planches, 5 figures, 3 cartes.

Appendices.—“A” *Fossiles pleistocènes et récents de la vallée du Saint-Laurent, de Prescott à Beauharnois, par E. J. Whittaker.*—“B” *Fossiles ordoviciens provenant des localités du système de canalisation du St-Laurent, Ontario et Québec, recueillis par L. H. Cole et J. Keele, identifiés par A. E. Wilson.*
See report No. 549 for English edition.

Édition épuisée.

N^o de cat. M32-550F

- 551.—**Morrisburg sheet, St. Lawrence River section, Ontario; geological map,** by J. Keele and L. H. Cole. 1922. 1m : 1".

Accompanying report No. 549.

35c.

Cat. No. M32-551

- 552.—**Cornwall sheet, St. Lawrence River section, Ontario and Quebec; geological map,** by J. Keele and L. H. Cole. 1922. 1m : 1".

Accompanying report No. 549.

35c.

Cat. No. M32-552

- 553.—**Valleyfield sheet, St. Lawrence River section, Quebec, geological map,** by J. Keele and L. H. Cole. 1922. 1m : 1".

Accompanying report No. 549.

35c.

Cat. No. M32-553

- 554.—**Preliminary report on the mineral production of Canada during the calendar year 1920,** by John McLeish. 1921. 24p. Tables.

Out of print.

Cat. No. M32-554

- 555.—**Silica in Canada: Its occurrence, exploitation, and uses: Part I: Eastern Canada,** by L. Heber Cole. 1923. 126p. 15 pls., 16 figs., 7 maps.

See maps No. 557, 558, 559, 560, 561, 562, and 563. See also report No. 686.

Out of print.

Cat. No. M32-555

- 556.—Not published.

- 557.—**Distribution of sandstone in the district of Nelles Corners, Haldimand county, Ontario; map,** by L. H. Cole. 1923. 1m : 1".

Accompanying report No. 555.

Out of print.

Cat. No. M32-557

- 558.—**Distribution of sandstone in the district north of the St. Lawrence river, between Kingston and Brockville, Ontario; map,** by L. H. Cole. 1923. 3.95m : 1".

Accompanying report No. 555.

Out of print.

Cat. No. M32-558

- 559.—**Distribution of sandstone in the vicinity of Ottawa, Ontario; map,** by L. H. Cole. 1923. 3.95m : 1".

Accompanying report No. 555.

Out of print.

Cat. No. M32-559

- 560.—**Distribution of sandstone in the vicinity of Montreal, Quebec; map,** by L. H. Cole. 1923. 3.95m : 1".

Accompanying report No. 555.

Out of print.

Cat. No. M32-560

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 561.—Chavigny and Montauban townships, Quebec; sketch map of quartzite deposits, by L. H. Cole. 1923. $\frac{1}{2}$ m : 1".

Accompanying report No. 555.

Out of print.

Cat. No. M32-561

- 562.—Distribution of quartzite in the Kamouraska district, Quebec; map, by L. H. Cole. 1923. 7.89m : 1".

Accompanying report No. 555.

Out of print.

Cat. No. M32-562

- 563.—Pilgrim islands, River St. Lawrence, near St. André, Kamouraska county, Quebec; sketch map, by L. H. Cole. 1923. 2000' : 1".

Accompanying report No. 555.

Out of print.

Cat. No. M32-563

- 564.—The preparation, transportation, and combustion of powdered coal, by John Blizzard. 1921. 131p. 3 pls., 39 figs., tables.

Appendix.—Boiler tests with pulverized coal, by Henry Kreisinger and John Blizzard.

\$1

Cat. No. M32-564

- 565.—Gas producer trials with Alberta coals, by John Blizzard and E. S. Malloch. 1921. 40p. 1 fig., 18 charts, tables. (Bulletin No. 33.)

No further Mines Branch reports were numbered as bulletins. Supplementing report No. 331.

35c.

Cat. No. M32-565

- 566.—The production of copper, gold, nickel, silver, zinc, and other metals during the calendar year 1920, by Arthur Buisson. 1921. 76p. Tables.

Out of print.

Cat. No. M32-566

- 567.—The production of coal and coke in Canada during the calendar year 1920, by John Casey. 1921. 36p. Tables.

Out of print.

Cat. No. M32-567

- 568.—Annual report on the mineral production during the calendar year 1920, by John McLeish. 1921. 80p. Tables.

Since 1920, reports on the mineral production in Canada have been published by the Mining, Metallurgical and Chemical Branch, Dominion Bureau of Statistics, and applications for these reports should be addressed to the Dominion Statistician, Ottawa, Ont.

Voir le rapport n^o 569 pour l'édition française.

Out of print.

Cat. No. M32-568

- 569.—Rapport annuel sur la production minérale du Canada durant l'année civile 1920, par John McLeish. 1922. 82p. Tableaux.

See report No. 568 for English edition.

Édition épuisée.

N^o de cat. M32-569F

- 570.—Barium and strontium in Canada, by Hugh S. Spence. 1922. 100p. 15 pls., 18 figs.

75c.

Cat. No. M32-570

- 571.—Not published.

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

572.—Not published.

573.—Rapport sommaire des investigations de la Division des mines durant l'année civile se terminant le 31 décembre 1920. 1923. 92p. 7 figures, tableaux.

See report No. 574 for English edition.

Édition épuisée.

N^o de cat. M32-573F

574.—Summary report of investigations made by the Mines Branch during the calendar year ending December 31, 1920. 1922. 87p. 7 figs.

Voir le rapport n^o 573 pour l'édition française. See separates No. 575, 576, 577, and 578.

35c.

Cat. No. M32-574

575.—Investigations in 1920: Mineral resources and technology. 1922. Pp. 5-22. Tables, fig.

Contents.—*The development of chemical and metallurgical industries in Canada*, by Dr. A. W. G. Wilson.—*Titaniferous iron ore deposits in Quebec, Ontario, and Alberta*, by A. H. A. Robinson.—*Mineral pigments in eastern Canada*, by Howells Fréchette.—*Barytes, celestite, talc, and bentonite*, by H. S. Spence.—*Alkali deposits of western Canada*, by L. H. Cole.—*Bituminous sands of Alberta*, by S. C. Ells.

Separate part of report No. 574.

15c.

Cat. No. M32-575

576.—Investigations in 1920: Ore dressing and metallurgy. 1922. Pp. 23-38. Tables.

Contents.—*Ores tested, and reports thereon*, by W. B. Timm and R. K. Carnochan.

Separate part of report No. 574.

15c.

Cat. No. M32-576

577.—Investigations in 1920: Fuels and fuel testing. 1922. Pp. 39-54, Appendix, pp. 76-81.

Contents.—*General review of investigations*, by B. F. Haanel.—*Carbonization of peat*, by E. Stansfield and J. H. H. Nicolls.—*Notes on the Hoffman potash test*, by J. H. H. Nicolls.—*Trent process for purifying coal high in ash; and, Preliminary report on the investigation of the manufacture of peat fuel*, by B. F. Haanel.

Separate part of report No. 574.

35c.

Cat. No. M32-577

578.—Investigations in 1920: Ceramics and road materials. 1922. Pp. 55-75.

Contents.—*Testing of brick and fireclays from various Provinces: Pottery clays; Clay-working industry—structural materials and clay wares; Field examination and clay testing; Practical instructions as to sampling; Laboratory tests; Testing under working conditions*, by Joseph Keele.—*Road material survey along the Gananoque—Napanee section of the Toronto-Montreal highway, Ontario; Road materials in Nova Scotia*, by H. Gauthier.

Separate part of report No. 574.

15c.

Cat. No. M32-578

579.—Titanium, by A. H. A. Robinson. 1922. 127p. 5 figs., tables, 2 maps.

See maps No. 581 and 582.

\$1

Cat. No. M32-579

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

580.—Not published.

581.—Orton mine and vicinity, Hastings county, Ontario; **magneto-metric map**, by A. H. A. Robinson. 1923. 200' : 1''.

Accompanying report No. 579.

Out of print.

Cat. No. M32-581

582.—Seine Bay titaniferous magnetite deposits, Rainy River District, Ontario; **magnetometric map**, by A. H. A. Robinson. 1923. 400' : 1''.

Accompanying report No. 579.

Out of print.

Cat. No. M32-582

583.—Talc and soapstone in Canada, by Hugh S. Spence. 1922. 85p. 2 pls., 15 figs., tables, 1 map.

See map No. 585.

75c.

Cat. No. M32-583

584.—Not published.

585.—Principal talc and soapstone occurrences in the Eastern townships, Quebec; **map**, by H. S. Spence. 1922. 8m : 1''.

Accompanying report No. 583.

Out of print.

Cat. No. M32-585

586.—Summary report of investigations made by the Mines Branch during the calendar year ending December 31, 1921. 1923. 346p. 20 pls., 15 figs., 21 diagrams, tables.

See separates No. 588, 589, 590, and 591.

Out of print.

Cat. No. M32-586

587.—Not published.

588.—Investigations in 1921: Mineral resources and technology and Chemical Laboratory Research. 1923. Pp. 7-77. Tables.

Contents.—Coalmont amber, by Dr. A. W. G. Wilson.—The iron industry, by A. H. A. Robinson.—Iron oxide pigments in Ontario, by Howells Fréchette.—Talc and soapstone, calcite, feldspar, by H. S. Spence.—Alkali deposits of western Canada, by L. H. Cole and F. M. MacNiver.—Cretaceous shales of Manitoba and Saskatchewan; their economic value as a possible source of petroleum:—Oil shales of Canada, by S. C. Ells.—Chemical products from natural gas:—The possibility of producing methanol (methyl alcohol) and formaldehyde from natural gas, by R. T. Elworthy.—Chemical and physical characters of bentonite, by E. A. Thompson and A. Sadler.

Separate part of report No. 586.

35c.

Cat. No. M32-588

589.—Investigations in 1921: Ore dressing and metallurgy. 1923. Pp. 78-204. 12 pls., 11 figs., tables.

Contents.—General review of investigations:—List of ores and metallurgical products on which experimental test and research work was conducted, by W. B. Timm.—Reports of the investigations conducted, R. K. Carnochan, C. S. Parsons, R. J. Traill, and others.—Other test work of the Division:—Additional equipment for the laboratories, by W. B. Timm.—Work and investigations of the Chemical Laboratory, by H. C. Mabee.

Separate part of report No. 586.

35c.

Cat. No. M32-589

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 590.—**Investigations in 1921: Fuels and fuel testing.** 1923. Pp. 205-252 and 319-338. 8 pls., diagrams, figs., tables.

Contents.—*Lignite carbonization, by J. H. H. Nicolls and Harold Kohl.—Notes on the burning quality of kerosene oils for illuminating purposes:—The lubricating value of cod liver oil, by P. V. Rosewarne.—Preliminary report on the investigation of oil shales, by A. A. Swinnerton.—Preliminary report on the investigation of peat fuel, by B. F. Haanel.*

Separate part of report No. 586.

35c.

Cat. No. M32-590

- 591.—**Investigations in 1921: Ceramics and road materials.** 1923. Pp. 253-318. Tables.

Contents.—**CERAMICS.**—*Outline of work done; Tests of clay from various provinces; Pottery clays; Removing scum from brick; Working stony clays for brick and tile; Method for sampling clay and shale deposits; Clayworking industry; Ball clay in Saskatchewan, by J. Keele.—ROAD MATERIALS:—Laboratory tests on road building stone and gravel; Investigations of road materials in Prescott and Russell counties, Ont.; Road material surveys in Rocky Mountains Park; Experimental abrasion test on concrete; Results of physical tests upon samples of stone and gravel from Nova Scotia, by H. Gauthier.*

Separate part of report No. 586.

35c.

Cat. No. M32-591

- 592.—**Molybdenum: Metallurgy and uses and the occurrence, mining and concentration of its ores,** by V. L. Eardley-Wilmot. 1925. 292p. 11 pls., 55 figs., 41 tables, 3 maps.

See maps No. 594, 595, and 596.

Out of print.

Cat. No. M32-592

- 593.—Not published.

- 594.—**Molybdenite occurrences in British Columbia; index map,** by V. L. Eardley-Wilmot. 1925. 35m : 1".

Accompanying report No. 592.

Out of print.

Cat. No. M32-594

- 595.—**Molybdenite occurrences in Ontario; index map,** by V. L. Eardley-Wilmot. 1925. 35m : 1".

Accompanying report No. 592.

Out of print.

Cat. No. M32-595

- 596.—**Molybdenite occurrences in Quebec and Maritime Provinces; index map,** by V. L. Eardley-Wilmot. 1925. 35m : 1".

Accompanying report No. 592.

Out of print.

Cat. No. M32-596

- 597.—**Development of chemical, metallurgical, and allied industries in Canada in relation to the mineral industry,** by A. W. G. Wilson. 1924. 329p. 39 tables, 12 diagrams.

This report was also published in two volumes. See reports No. 598 and 599.

\$2.25

Cat. No. M32-597

- 598.—**Development of chemical, metallurgical, and allied industries in Canada in relation to the mineral industry. Volume 1: Chemical industries,** by A. W. G. Wilson. Pp. 1-175. Tables, diagrams.

Separate part of report No. 597.

\$1.30

Cat. No. M32-598

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 599.—**Development of chemical, metallurgical, and allied industries in Canada in relation to the mineral industry. Volume 2: Metallurgical and allied industries**, by A. W. G. Wilson. Pp. 177-311. Tables, diagrams.

Separate part of report No. 597.

\$1

Cat. No. M32-599

600.—Not published.

601.—Not published.

602.—Not published.

603.—Not published.

604.—Not published.

- 605.—**Summary report on Mines Branch investigations during the calendar year ending December 31, 1922.** 1924. 273p. 5 pls., 17 figs., 11 diagrams, tables.

See separates No. 607, 608, 609, and 610.

Out of print.

Cat. No. M32-605

606.—Not published.

- 607.—**Investigations in 1922: Mineral resources and technology, and Chemical Laboratory Research.** 1924. Pp. 7-70. Tables, figs., diagrams.

Contents.—MINERAL RESOURCES DIVISION:—*Mineral pigments*, by Howells Fréchette:—*Alkali deposits, western Canada*; *Volcanic ash near Waldeck, Sask.*, by L. H. Cole:—*Canadian feldspar in 1922*; *Fluorspar in 1922*; *Graphite in Canada, 1922*; *Talc and soapstone in Canada, 1922*; *Molybdenum situation in Canada, 1922*, by V. L. Eardley-Wilmot:—*Bituminous sands of northern Alberta*, by S. C. Ells.—CHEMICAL DIVISION:—*Some Canadian fossil resins*; *Character of waters leaking into oil and gas wells*, by R. T. Elworthy.

Separate part of report No. 605.

35c.

Cat. No. M32-607

- 608.—**Investigations in 1922: Ore dressing and metallurgy.** 1924. Pp. 71-193. Tables, pls., figs., diagrams.

Contents.—*General review of investigations*; *List of ores and metallurgical products on which experimental test and research work was conducted*, by W. B. Timm.—*Reports on the investigations conducted*, by R. K. Carnochan and others.—*Other test work of the Division*; *Additional equipment for the laboratories*, by W. B. Timm.

Separate part of report No. 605.

35c.

Cat. No. M32-608

- 609.—**Investigations in 1922: Fuels and fuel testing.** 1924. Pp. 194-225 and 262-266. Tables, figs., diagrams.

Contents.—*Carbonization of peat in commercial hardwood distillation ovens*, by R. E. Gilmore and Harold Kohl.—*Report on the treatment of oil shale from New Brunswick by the Ryan Oil Digestion process*, by A. A. Swinnerton.—*Preliminary gasoline survey*, by P. V. Rosewarne.—*Interim report of the Joint Peat Committee*, by B. F. Haanel.

Separate part of report No. 605.

35c.

Cat. No. M32-609

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 610.—**Investigations in 1922: Ceramics and road materials.** 1924. Pp. 226-261. Tables.

Contents.—*Ceramic materials*, by Howells Fréchette.—*Investigation of road materials along Hawk Creek-McLeod Meadows section of the Banff-Windermere highway, Rocky Mountains Park; Prospecting for road materials between Massive and Johnson Canyon; Experiments for investigating the test for the crushing strength of rock*, by H. Gauthier.—*Road materials in Nova Scotia*, by R. H. Picher. Separate part of report No. 605.

35c.

Cat. No. M32-610

- 611.—**The mineral industries of Canada**, compiled by A. H. A. Robinson. British Empire Exhibition editions: First edition. 138p. 35 pls., 1 map.—Second edition. 1925. 140p. 35 pls., 1 map. Voir le rapport n° 612 pour l'édition française. See map No. 613.

35c.

Cat. No. M32-611

- 612.—**Les industries minérales du Canada**, par A. H. A. Robinson. 1924. 152p. 35 planches, tableaux, carte.

See report No. 611 for English edition.

Édition épuisée.

N° de cat. M32-612F

- 613.—**Mineral map of the Dominion of Canada.** British Empire Exhibition editions. (1st) 1924 and (2nd) 1925. 100m : 1".

Accompanying report No. 611.

Out of print.

Cat. No. M32-613

- 614.—**Facts about peat**, by B. F. Haanel. 1924. 48p. Tables.

Voir le rapport n° 615 pour l'édition française.

35c.

Cat. No. M32-614

- 615.—**Renseignements sur la tourbe**, par B. F. Haanel. 1924. 48p. Tableaux.

See report No. 614 for English edition.

35c.

N° de cat. M32-615F

- 616.—**Investigations of mineral resources and the mining industry, 1923.** 1924. 74p. Tables.

Contents.—*Bentonite; and Feldspar*, by H. S. Spence.—*Bituminous sands of northern Alberta*, by S. C. Ells.—*Natural abrasive materials in Canada*, by V. L. Eardley-Wilmot.—*Natural gas in Alberta*, by R. T. Elworthy (see report No. 616A).—*Sodium and magnesium salts of western Canada*, by L. H. Cole.—*Zinc-lead mining in British Columbia*, by A. H. A. Robinson.—*Canadian exposition train in France and Belgium, 1923*, by A. Buisson.

25c.

Cat. No. M32-616

- 616A.—**Natural gas in Alberta**, by R. T. Elworthy. 1924. 35p. Tables.

Advance section of report No. 616.

15c.

Cat. No. M32-616A

- 617.—**Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1923.** 1925. 150p. 3 pls., 11 figs., tables.

Contents.—(1) *General review of investigations and list of ores and metallurgical products on which experimental test and research work was conducted*, by W. B. Timm.—(2) *Reports on investigations conducted*, by C. S. Parsons, R. K. Carnochan, and J. S. Godard.—(3) *Reports on the work and investigations of the*

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

617.—Investigations—Continued.

Chemical Laboratories of the Division, by H. C. Mabey, R. J. Traill, and B. P. Coyne.—(4) Selective flotation as applied to Canadian ores, by C. S. Parsons.—(5) Summary of experimental tests on the beneficiation of Canadian iron ores; (6) Selective flotation of the nickeliferous pyrrhotite ores of Ontario, by W. B. Timm.—(7) Description of ore concentration plants in Canada.

75c.

Cat. No. M32-617

618.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1923. 1924. 86p. 2 pls., 5 figs., 7 diagrams, tables.

Contents.—(1) The carbonization of lignite and sub-bituminous coals, by Harold Khol.—(2) Survey of Maritime Provinces coals; (3) A study of the nature of sulphur in coal and coke from the Maritime Provinces, by J. H. H. Nicolls.—(4) Gasoline survey for 1923, by P. V. Rosewarne.—(5) The Hartman oil shale retort, by A. A. Swinnerton.—(6) Report on the Ramage process for oil refining, by R. E. Gilmore and P. V. Rosewarne.

35c.

Cat. No. M32-618

619.—Investigations in ceramics and road materials (Testing and Research Laboratories), 1923. 1925. 75p. 1 pl., tables.

Contents.—Introductory.—CERAMICS: (1) Investigation of ceramic industry, by Howells Fréchette; (2) Exhibit for the British Empire Exhibition; (3) Laboratory investigations; (4) Tunnel kilns, by L. P. Collin.—ROAD MATERIALS: (5) Road materials in Ontario and Quebec, with particular reference to their relative merits, based on a study of their use, by Henri Gauthier; (6) Road materials in Nova Scotia and New Brunswick, by R. H. Picher.

35c.

Cat. No. M32-619

620.—Not published.

621.—Not published.

622.—Not published.

623.—Not published.

624.—Catalogue of Mines Branch publications. 14th edition, revised December 1926. 1927. 47p.

Contents.—Alphabetical guide to catalogue.—Reports.—Memorandum series.—Traductions françaises.—Maps.

Out of print.

Cat. No. M32-624

625.—Bituminous sands of Northern Alberta, by Sidney C. Ells. 1924. 35p. 6 pls., tables.

See also reports No. 632 and 684.

35c.

Cat. No. M32-625

626.—Bentonite, by Hugh S. Spence. 1924. 36p. 14 pls., 2 figs.

Out of print.

Cat. No. M32-626

627.—The mining laws of Canada—a digest of Dominion and Provincial laws. 1924. 43p. (British Empire Exhibition edition).

Out of print.

Cat. No. M32-627

628.—Central and district heating: possibilities of application in Canada, by F. A. Combe. 1924. 79p. 26 figs., 4 tables. (Dominion Fuel Board No. 3.)

Voir le rapport n° 629 pour l'édition française.

35c.

Cat. No. M32-628

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 629.—**Chauffage central et régional:** possibilité de sa mise en pratique au Canada, par F. A. Combe. 1925. 82p. 28 figures, 4 tableaux. (Commission fédérale du combustible n° 4.)
See report No. 628 for English edition.
Édition épuisée. *N° de cat. M32-629F*
- 630.—**Coke as a household fuel in central Canada**, by J. L. Landt. 1925. 140p. 51 pls., 18 figs., 24 tables. (Dominion Fuel Board No. 5.)
Voir le rapport n° 631 pour l'édition française.
35c. *Cat. No. M32-630*
- 631.—**Le coke comme combustible de ménage dans le Canada central**, par J. L. Landt. 1926. 149p. 51 planches, 18 figures, 24 tableaux. (Commission fédérale du combustible n° 6.)
See report No. 630 for English edition.
Édition épuisée. *N° de cat. M32-631F*
- 632.—**Bituminous sands of northern Alberta:** occurrence and economic possibilities, report on investigations to the end of 1924, by S. C. Ells. 1926. 244p. 43 pls., 47 figs., 6 tables. In portfolio: 8 maps and 4 sheets showing projected position of bituminous sand.
See maps No. 633, 634, 635, 636, 637, 638, 639, and 640. See also reports No. 625 and 684.
\$1 *Cat. No. M32-632*
- 633.—**Bituminous sands of northern Alberta, sheet No. 1:** Townships 87, 88, and 89; **topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
35c. *Cat. No. M32-633*
- 634.—**Bituminous sands of northern Alberta, sheet No. 2:** Townships 88 and 89; **topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
35c. *Cat. No. M32-634*
- 635.—**Bituminous sands of northern Alberta, sheet No. 3:** Townships 90 and 91; **topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
35c. *Cat. No. M32-635*
- 636.—**Bituminous sands of northern Alberta, sheet No. 4:** Townships 92 and 93; **topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
35c. *Cat. No. M32-636*
- 637.—**Bituminous sands of northern Alberta, sheet No. 5:** Townships 94 and 95; **topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
Out of print. *Cat. No. M32-637*
- 638.—**Bituminous sands of northern Alberta, sheet No. 6:** Townships 96 and 97; **topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
Out of print. *Cat. No. M32-638*

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Reports and maps—Rapports.—Continued—Suite.

- 639.—**Bituminous sands of northern Alberta, sheet No. 7: Township 98; topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
35c. Cat. No. M32-639
- 640.—**Bituminous sands of northern Alberta, sheet No. 8: Townships 99 and 100; topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
35c. Cat. No. M32-640
- 641.—**Peat: its manufacture and uses**, by B. F. Haanel. (Final report of the Peat Committee appointed jointly by the Governments of the Dominion of Canada and the Province of Ontario). 1926. 298p. 58 pls., 46 figs., 28 tables.
Appendices.—"A" *Investigation of drying conditions obtaining during the manufacture of peat fuel at the Alfred peat bog*, by H. A. Leverin.—"B" *Preliminary report on the relations of the maceration to the drying qualities of peat*, by R. E. Gilmore.—"C" *Manufacture of carbonized peat at Dumfries, Scotland*, report by J. O. Roos of Hjelmsäter.
75c. Cat. No. M32-641
- 642.—**Investigations of mineral resources and the mining industry, 1924.** 1926. 118p. 5 pls., figs., tables.
Contents.—(1) *A review of fifteen years' progress in the production of non-metallic minerals in Canada*, by members of the staff of the Mineral Resources Division.—(2) *Titaniferous magnetic deposits of Bourget township, Chicoutimi district, Quebec*, by A. H. A. Robinson.—(3) *The goldfields of western Quebec*, by W. B. Timm and A. H. A. Robinson.—(4) *Magnesium sulphate in B.C.*; (5) *Sodium carbonate in B.C.*, by M. F. Goudge.—(6) *Natural gas and petroleum in northern Alberta*, by R. T. Elworthy.
Voir le rapport n° 685 pour l'édition française.
35c. Cat. No. M32-642
- 643.—**Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1924.** 1926. 115p. 6 figs., 7 tables.
Contents.—(1) *General review of investigations*, by W. B. Timm.—*Reports of investigations*; (2) *Ore Dressing and Metallurgical Laboratory*, by W. B. Timm, C. S. Parsons, R. K. Carnochan, and J. S. Godard; (3) *Hydrometallurgical Laboratory*, by R. J. Traill and W. R. McClelland; (4) *Chemical Laboratory of the Division*, by H. C. Mabee.—(5) *The concentration of lead-zinc ores of eastern Canada; The concentration of the Lake George antimony ores*, by C. S. Parsons.
35c. Cat. No. M32-643
- 644.—**Investigations of fuels and fuel testing (Testing and Research Laboratories), 1924.** 1926. 81p. 4 pls., 5 figs., tables.
Contents.—(1) *Coking experiments on coals from the Maritime Provinces*, by B. F. Haanel and R. E. Gilmore.—(2) *Friability tests on various fuels sold in Canada*, by J. H. H. Nicolls.—(3) *The effects of exposing Canadian lignite to atmospheres of different humidities*, by J. H. H. Nicolls.—(4) *The examination of some lubricating oils sold in Canada*, by P. V. Rosewarne.—(5) *Gasoline survey for 1924*, by P. V. Rosewarne and J. McD. Chantler.—(6) *Report of carbonization and washing experiments on sub-bituminous coal from Coal Valley, Alberta*, by R. A. Strong.—(7) *Distillation of oil shale—comparison of laboratory methods* by A. A. Swinnerton.
35c. Cat. No. M32-644

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 645.—**Investigations in ceramics and road materials** (Testing and Research Laboratories), 1924. 1925. 45p. Tables.

Contents.—*Introductory.*—**CERAMICS:** (1) *Ceramic industry*, by Howells Fréchette; (2) *Laboratory investigations*; (3) *Cost of burning brick and tile*, by L. P. Collin.—**ROAD MATERIALS:** (4) *New Brunswick and Nova Scotia*, by R. H. Picher.

35c.

Cat. No. M32-645

- 646.—**Sodium sulphate of Western Canada:** occurrence, uses, and technology, by L. Heber Cole. 1926. 160p. 15 pls., 16 figs., 10 tables, 22 maps.

See maps No. 647 to 668 inclusive.

55c.

Cat. No. M32-646

- 647.—**Sodium sulphate occurrences in western provinces of Canada; index map**, by L. H. Cole. 1926. 35m : 1".

Accompanying report No. 646.

35c.

Cat. No. M32-647

- 648.—**Deposit No. 1: Muskiki Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 4620' : 1".

Accompanying report No. 646.

35c.

Cat. No. M32-648

- 649.—**Deposit No. 2: Frederick Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 2700' : 1".

Accompanying report No. 646.

35c.

Cat. No. M32-649

- 650.—**Deposit No. 6: Chain Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 2100' : 1".

Accompanying report No. 646.

35c.

Cat. No. M32-650

- 651.—**Deposit No. 7: Snakehole Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 1650' : 1".

Accompanying report No. 646.

35c.

Cat. No. M32-651

- 652.—**Deposit No. 8: Corral Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 1950' : 1".

Accompanying report No. 646.

35c.

Cat. No. M32-652

- 653.—**Deposit No. 9: Ingebright Lake, Sask., sodium sulphate deposit No. 1; map**, by L. H. Cole. 1926. 1950' : 1".

Accompanying report No. 646.

35c.

Cat. No. M32-653

- 654.—**Deposit No. 11: Berry Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 1750' : 1".

Accompanying report No. 646.

35c.

Cat. No. M32-654

- 655.—**Deposit No. 42: Sybouts Lake, Sask., sodium sulphate deposit No. 1; map**, by L. H. Cole. 1926. 1650' : 1".

Accompanying report No. 646.

35c.

Cat. No. M32-655

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 656.—**Deposit No. 13: Ceylon Lake, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 2900' : 1".**
Accompanying report No. 646.
35c. *Cat. No. M32-656*
- 657.—**Deposit No. 15: Whiteshore Lake, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 3250' : 1".**
Accompanying report No. 646.
35c. *Cat. No. M32-657*
- 658.—**Deposit No. 19: Vincent Lake, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 1600' : 1".**
Accompanying report No. 646.
35c. *Cat. No. M32-658*
- 659.—**Deposit No. 28: Regina Beach, Sask., sodium sulphate deposit No. 1; map, by L. H. Cole. 1926. 600' : 1".**
Accompanying report No. 646.
35c. *Cat. No. M32-659*
- 660.—**Deposit No. 29: Regina Beach, Sask., sodium sulphate deposit No. 2; map, by L. H. Cole. 1926. 1050' : 1".**
Accompanying report No. 646.
35c. *Cat. No. M32-660*
- 661.—**Deposit No. 30: Horseshoe Lake, Horizon, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 2200' : 1".**
Accompanying report No. 646.
35c. *Cat. No. M32-661*
- 662.—**Deposit No. 35: Boot Lake, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 2000' : 1".**
Accompanying report No. 646.
35c. *Cat. No. M32-662*
- 663.—**Deposit No. 37: Grandora Lake, Sask., sodium sulphate deposit No. 1; map, by L. H. Cole. 1926. 1000' : 1".**
Accompanying report No. 646.
35c. *Cat. No. M32-663*
- 664.—**Deposit No. 37A: Grandora Lake, Sask., sodium sulphate deposit No. 2; map, by L. H. Cole. 1926. 1900' : 1".**
Accompanying report No. 646.
35c. *Cat. No. M32-664*
- 665.—**Deposit No. 12: Sybouts Lake, Sask., sodium sulphate deposit No. 2; map, by L. H. Cole. 1926. 2400' : 1".**
Accompanying report No. 646.
35c. *Cat. No. M32-665*
- 666.—**Deposit No. 48: Alsask Lake, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 1680' : 1".**
Accompanying report No. 646.
35c. *Cat. No. M32-666*

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 667.—Deposit No. 69: Metiskow Lake, Alberta, sodium sulphate deposit; map, by L. H. Cole. 1926. 2050' : 1".

Accompanying report No. 646.

35c.

Cat. No. M32-667

- 668.—Deposit No. 82: Ingebright Lake, Sask., sodium sulphate deposit No. 2; map, by L. H. Cole. 1926. 1400' : 1".

Accompanying report No. 646.

35c.

Cat. No. M32-668

- 669.—Investigations of mineral resources and the mining industry, 1925. 1926. 84p.

Contents.—(1) *Hot springs in western Canada—their radioactive and chemical properties*; (2) *Natural gas in New Brunswick*, by R. T. Elworthy.—(3) *The building and ornamental stone trade in Great Britain*, by W. A. Parks.—(4) *Notes on zinc and lead in eastern Canada*, by A. H. A. Robinson.—(5) *Lithium-bearing minerals in Canada*, by L. H. Cole and V. L. Eardley-Wilmot.—(6) *The present status of the abrasive industry*, by V. L. Eardley-Wilmot.

Out of print.

Cat. No. M32-669

- 670.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1925. 1926. 123p. 4 pls., 9 figs., table.

Contents.—(1) *General review of investigations*, by W. B. Timm.—*Reports of investigations*; (2) *Ore Dressing and Metallurgical Laboratory*, by C. S. Parsons, R. K. Carnochan, and J. S. Godard;—(3) *Electrochemical and Hydrometallurgical Laboratory*, by R. J. Traill and W. R. McClelland;—(4) *Pyrometallurgical Laboratory*, by H. C. Mabee and A. E. Smaill.—(5) *Report on the work of the Chemical Laboratory*, by H. C. Mabee.—(6) *The concentration of Canadian flake graphite ores*, by C. S. Parsons.—*The ores of western Quebec—their character and metallurgical treatment*, by W. B. Timm.

35c.

Cat. No. M32-670

- 671.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1925. 1927. 184p. 7 pls., 17 figs., 68 tables.

Contents.—*General review of investigations*, by B. F. Haanel and R. E. Gilmore.—PART I: (1) *Examination of typical cokes* (see separate No. 671-1); (2) *Tests of various fuels* (see separate No. 671-2); (3) *Low temperature carbonization of bituminous coals* (see separate No. 671-3); (4) *Effects of continued weathering upon the friabilities of various fuels*, by J. H. H. Nicolls.—(5) *Analyses of solid fuels* (see separate No. 671-4).—PART II: (1) *The examination of lubricating oils after use in automobile engines*, by P. V. Rosewarne; (2) *Gasoline survey for 1925*, by P. V. Rosewarne and H. McD. Chantler; (3) *Analyses of oils and liquid fuels*, by P. V. Rosewarne.—PART III: (1) *Distillation of oil shale with circulation of uncondensed gases*, by A. A. Swinnerton.

75c.

Cat. No. M32-671

- 671-1.—Examination of typical cokes sold in Canada as household fuels, by R. E. Gilmore, C. B. Mohr, and others. 1927. 27p. 2 pls., fig., tables.

Separate part of report No. 671.

15c.

Cat. No. M32-671/1

- 671-2.—Tests of various fuels made in a domestic hot-water boiler at the Fuel Testing Station in co-operation with the Dominion Fuel Board, by E. S. Malloch and C. E. Baltzer. 1927. 33p. Figs., tables. Separate part of report No. 671.

15c.

Cat. No. M32-671/2

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 671-3.—**Low-temperature carbonization of bituminous coals**, by R. A. Strong. 1927. 39p. 4 pls., figs., tables.
Separate part of report No. 671.
15c. Cat. No. M32-671/3
- 671-4.—**Analyses of solid fuels**, by J. H. H. Nicolls. 1927. 34p. Tables.
Separate part of report No. 671.
15c. Cat. No. M32-671/4
- 672.—**Investigations in ceramics and road materials** (Testing and Research Laboratories), 1925. 1926. 35p. Tables.
Contents.—*Introductory*, by Howells Fréchette.—**CERAMICS:** (1) *Clay-working plants in Quebec, Nova Scotia, and New Brunswick*; (2) *Andalusite in Nova Scotia*; (3) *Causes and prevention of scumming and efflorescence*, by L. P. Collin; (4) *Texture of ceramic materials*, by J. F. McMahon.—**ROAD MATERIALS:** (5) *Eastern Ontario*; (6) *Gravel and gravel roads*, by R. H. Picher.
35c. Cat. No. M32-672
- 673.—**Abrasives: products of Canada, technology and application. Part 1: Silicious abrasives: sandstones, quartz, tripoli, pumice, and volcanic dust**, by V. L. Eardley-Wilmot. 1927. 119p. 14 pls., 8 figs., 16 tables.
Voir le rapport n° 674 pour l'édition française.
45c. Cat. No. M32-673
- 674.—**Les abrasifs: produits du Canada, technologie et applications. Partie 1: Abrasifs siliceux: grès, quartz, tripoli, ponce et poussière volcanique**, par V. L. Eardley-Wilmot. 1930. 128p. 14 planches, 8 figures, 16 tableaux.
See report No. 673 for English edition.
45c. N° de cat. M32-674F
- 675.—**Abrasives: products of Canada, technology and application. Part II: Corundum and diamond**, by V. L. Eardley-Wilmot. 1927. 51p. 5 pls., 6 figs., 4 tables.
Voir le rapport n° 676 pour l'édition française.
35c. Cat. No. M32-675
- 676.—**Les abrasifs: produits du Canada, technologie et applications. Partie II: Corindon et diamant**, par V. L. Eardley-Wilmot. 1931. 53p. 5 planches, 6 figures, 4 tableaux.
See report No. 675 for English edition.
35c. N° de cat. M32-676F
- 677.—**Abrasives: products of Canada, technology and application. Part III: Garnet**, by V. L. Eardley-Wilmot. 1927. 69p. 4 pls., 19 figs., 6 tables.
Voir le rapport n° 678 pour l'édition française. See also report No. 699.
35c. Cat. No. M32-677
- 678.—**Les abrasifs: produits du Canada, technologie et applications. Partie III: Le grenat**, par V. L. Eardley-Wilmot. 1931. 73p. 4 planches, 19 figures, 6 tableaux.
See report No. 677 for English edition. Voir aussi le rapport n° 700.
35c. N° de cat. M32-678F

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 679.—**Helium in Canada**, by R. T. Elworthy. 1926. 48p. 2 pls., tables, 2 maps.
See maps No. 680 and 681.
35c.

Cat. No. M32-679

- 680.—**Alberta; map showing main gas fields and pipe lines**, by R. T. Elworthy. 1926. 35m : 1".
Accompanying report No. 679.
35c.

Cat. No. M32-680

- 681.—**Gas and oil fields and pipe lines in southwestern Ontario; map**, by R. T. Elworthy. 1926. 12m : 1".
Accompanying report No. 679.
35c.

Cat. No. M32-681

- 682.—**Preliminary report on the limestones of Quebec and Ontario**, by M. F. Goudge. 1927. 75p. 16 pls., 3 figs., tables.
Voir le rapport n° 683 pour l'édition française.
35c.

Cat. No. M32-682

- 683.—**Rapport préliminaire sur les calcaires des provinces de Québec et d'Ontario**, par M. F. Goudge. 1929. 81p. 16 planches, 3 figures, tableaux.
See report No. 682 for English edition.
Édition épuisée.

N° de cat. M32-683F

- 684.—**Use of Alberta bituminous sands for surfacing of highways**, by S. C. Ells. 1927. 37p. 5 pls., 10 figs., tables.
See also reports No. 625 and 632.
30c.

Cat. No. M32-684

- 685.—**Recherches touchant les ressources minérales et l'industrie minière, 1924**. 1927. 72p. Figures, tableaux.
Sommaire.—*Une revue de quinze années de progrès dans la production de minéraux non-métalliques au Canada, par le membres du personnel de la section des Ressources minérales.*—*Gisements de magnétite titanifère du canton de Bourget, district de Chicoutimi (Québec), par A. H. A. Robinson.*—*Les terrains aurifères du Québec occidental, par W. B. Timm et A. H. A. Robinson.*
See report No. 642 for English edition.
35c.

N° de cat. M32-685F

- 686.—**Silica in Canada: its occurrence, exploitation, and uses. Part II: Western Canada**, by L. Heber Cole. 1928. 59p. 6 pls., 7 figs.
Appendix.—*Recent developments in the silica industry in Eastern Canada.*
See also report No. 555.
35c.

Cat. No. M32-686

- 687.—**Investigations of mineral resources and the mining industry, 1926**. 1928. 80p. 7 pls., 5 figs., tables.

Contents.—(1) *Flotation reagents*, by C. S. Parsons.—(2) *Anthraxolite near Sudbury, Ont.*; (3) *Asbestos in northern Ontario*; (4) *Feldspar in the Sudbury region, Ont.*; (5) *Graphite in Ontario and Quebec*; (6) *Lithium minerals in south-eastern Manitoba*; (7) *The Canadian soapstone industry*, by H. S. Spence.—(8) *Sodium carbonate at Soap lake, B.C.*; (9) *Recent developments in the gypsum industry in B.C.*, by L. H. Cole.—(10) *Manitoba as a mining province*, by A. H. A. Robinson.—(11) *The limestones of Nova Scotia and New Brunswick; and, The*

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Reports and maps—Rapports.—Continued—Suite.

687.—Investigations of mineral resources, 1926.—Continued.

limestones of Gaspé peninsula; (12) The limestones of Timiskaming district, Ontario, by M. F. Goudge.—(13) Notes on the quicksilver occurrences in Canada; (14) Notes on the occurrences, metallurgy, and uses of quicksilver, by V. L. Eardley-Wilmot.—(15) Granite paving blocks; (16) The asbestos industry in Canada, by C. H. Freeman.

Out of print.

Cat. No. M32-687

688.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1926. 1928. 134p. 5 pls., tables.

Contents.—(1) General review of investigations, by W. B. Timm.—Reports of investigations; (2) Ore Dressing and Metallurgical Laboratory, by C. S. Parsons, R. K. Carnochan, and J. S. Godard.—(3) Electrochemical and Hydrometallurgical Laboratory, by R. J. Traill and W. R. McClelland.—(4) Report on the work of the Chemical Laboratory, by H. C. Mabey.—(5) Selective flotation as applied to Canadian ores, by C. S. Parsons.

75c.

Cat. No. M32-688

689.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1926. 1928. 132p. 7 pls., 16 figs., 41 tables.

Contents.—PART I: Solid fuels (see report No. 689-1).—PART II: Liquid fuels (see report No. 689-2).

75c.

Cat. No. M32-689

689-1.—Investigations of fuels and fuel testing, 1926. Part I: Solid fuels. 1928. 85p. 3 pls., figs., tables.

Contents.—General review of investigations, by B. F. Haanel and R. E. Gilmore.—(1) Instructions for burning coal, coke, and peat, by E. S. Malloch and C. E. Baltzer.—(2) Low-temperature carbonization—Continuation of tests on Canadian bituminous coals, by R. A. Strong.—(3) A study of the nature of sulphur in Canadian coal and coke; (4) Air-drying of Canadian lignite and the reabsorption of moisture by the same; (5) Analyses of solid fuels, by J. H. H. Nicolls.

Separate part of report No. 689.

35c.

Cat. No. M32-689/1

689-2.—Investigations of fuels and fuel testing, 1926. Part II: Liquid fuels. 1928. Pp 86-132. 4 pls., figs., tables.

Contents.—General review of investigations, by B. F. Haanel and R. E. Gilmore.—(1) Gasoline survey for 1926, by P. V. Rosewarne and A. F. Gill.—(2) Report of experiments on the dehydration of bitumen emulsion from Alberta bituminous sands, by P. V. Rosewarne and G. P. Connell.—(3) Oil shale from Rosevale, New Brunswick, by A. A. Swinnerton.—(4) Report on the Pritchard process for the distillation of oil shale, by R. E. Gilmore and A. A. Swinnerton.—(5) Canadian shale oil, and bitumen from bituminous sands, as sources of gasoline by pressure cracking, by R. E. Gilmore, P. V. Rosewarne, and A. A. Swinnerton.

35c.

Cat. No. M32-689/2

690.—Investigations in ceramics and road materials (Testing and Research Laboratories), 1926. 1928. 70p. 1 fig., tables.

Contents.—Introduction, by Howells Fréchette.—CERAMICS: (1) Brick sizes in Canada, by Howells Fréchette; (2) Methods of using barium for scum-prevention in stiff-mud brick; (3) Manufacture of grey brick, by L. P. Collin; (4) Refractoriness of moulding sand, by J. F. McMahon; (5) Kaolin and associated clays of Punk island, by L. H. Cole and J. F. McMahon.—ROAD MATERIALS: (6) Commercial crushed stone, Ontario and Quebec; (7) Stone and its use in road construction, by R. H. Picher.

35c.

Cat. No. M32-690

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 691.—**Diatomite: its occurrence, preparation, and uses**, by V. L. Eardley-Wilmot. 1928. 182p. 15 pls., 31 figs., 17 tables, 1 map.

See map No. 692.

Out of print.

Cat. No. M32-691

- 692.—**Diatomite deposits in Maritime Provinces; index map**, by V. L. Eardley-Wilmot. 1927. 17m : 1".

Accompanying report No. 691.

Out of print.

Cat. No. M32-692

- 693.—**Mineral map of Canada**. 1929. Revised in 1933 and renumbered as 702.

See map No. 702.

Out of print.

Cat. No. M32-693

- 694.—**Investigations of mineral resources and the mining industry**. 1927. 1928. 60p. 11 pls., 7 figs., 8 tables.

Contents.—*Bituminous sands of northern Alberta—experimental drilling and paving operations*, by S. C. Ells.

35c.

Cat. No. M32-694

- 695.—**Investigations in ore dressing and metallurgy (Testing and Research Laboratories)**, 1927. 1928. 186p. 6 pls., 1 fig., tables.

Contents.—(1) *General review of investigations*, by W. B. Timm.—*Reports of investigations*: (2) *Ore Dressing and Metallurgical Laboratories*, by C. S. Parsons, A. K. Anderson, and J. S. Godard:—(3) *Non-Metallic Laboratory*, by R. K. Carnochan and R. A. Rogers:—(4) *Hydrometallurgical Laboratory*, by R. J. Truill, W. R. McClelland, and J. D. Johnston.—*Report on the treatment of mixed (bulk) concentrates from base metal sulphide ores*, by W. R. Harris.—(5) *Report on the work and investigations of the Chemical Laboratory*, by H. C. Mabee.—(6) *Concentration of the ores of western Quebec*, by J. S. Godard.—*Custom concentrators*, by C. S. Parsons and A. K. Anderson.

75c.

Cat. No. M32-695

- 696.—**Investigations of fuels and fuel testing (Testing and Research Laboratories)**, 1927. 1928. 107p. 10 pls., 9 figs., 35 tables.

Contents.—*General review of investigations*, by B. F. Haanel and R. E. Gilmore.—*Part I: Solid fuels (see report No. 696-1).*—*Part II: Liquid fuels (see report No. 696-2).*

75c.

Cat. No. M32-696

- 696-1.—**Investigations of fuels and fuel testing, 1927. Part I: Solid fuels**. 1929. 70p. 10 pls., figs., tables.

Contents.—*General review of investigations*, by B. F. Haanel and R. E. Gilmore.—(1) *The use of gas and by-product cokes for domestic heating purposes*, by E. S. Malloch and C. E. Baltzer.—(2) *Coking tests on coals from western Canada*, by R. E. Gilmore and R. A. Strong.—(3) *Low-temperature carbonization—continuation of tests on Canadian bituminous coals*, by R. A. Strong.—(4) *Analyses of solid fuels*, compiled by J. H. H. Nicolls.

Separate part of report No. 696.

35c.

Cat. No. M32-696/1

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Reports and maps—Rapports.—Continued—Suite.

- 696-2.—Investigations of fuels and fuel testing, 1927. Part II: Liquid fuels. 1929. Pp. 71-103. Figs., tables.

Contents.—General review of investigations, by B. F. Haanel and R. E. Gilmore.—(1) Gasoline survey for 1927, by P. V. Rosewarne and R. J. Offord.—(2) The assay of bituminous sands, by R. E. Gilmore, A. A. Swinnerton and G. P. Connell.

Separate part of report No. 696.
35c.

Cat. No. M32-696/2

- 697.—Investigations in ceramics and road materials in 1927. 1929. 80p. Tables.

Contents.—Introduction by Howells Fréchette.—CERAMICS: (1) Treatment of certain western clays to overcome drying defects, by Howells Fréchette and J. G. Phillips; (2) Preliminary report on clay gathering, by J. F. McMahon:—(3) Clays and shales of the Grand Lake area, N.B., by Howells Fréchette and J. F. McMahon.—ROAD MATERIALS: (4) In Prince Edward Island; (5) Stone quarries in Quebec; (6) The testing of non-bituminous road materials (see report No. 697-1), by R. H. Picher.

35c.

Cat. No. M32-697

- 697-1.—The testing of non-bituminous road materials, by R. H. Picher. 1929. 10p.

Separate part of report No. 697.
15c.

Cat. No. M32-697/1

- 698.—Industrial fuel and power statistics for Ontario, calendar year 1925, by E. S. Malloch and C. E. Baltzer. 1928. 23p. 12 figs., tables.

Compiled and published with the approval and co-operation of the Dominion Fuel Board and the Dominion Bureau of Statistics.

15c.

Cat. No. M32-698

- 699.—Abrasives: products of Canada, technology and application. Part IV: Artificial abrasives and manufactured abrasive products and their uses, by V. L. Eardley-Wilmot. 1929. 144p. 19 pls., 14 figs., 11 tables.

Voir le rapport n° 700 pour l'édition française. See also reports No. 673, 675, and 677.

30c.

Cat. No. M32-699

- 700.—Les abrasifs: produits du Canada, technologie et applications.

Partie IV: Abrasifs artificiels, produits abrasifs et usages, par V. L. Eardley-Wilmot. 1934. 153p. 19 planches, 14 figures, 11 tableaux.

See report No. 699 for English edition. Voir aussi les rapports n° 674, 676 et 678. Édition épuisée.

N° de cat. M32-700F

- 701.—Mica, by H. S. Spence. 1929. 142p. 21 pls., 1 chart, 10 figs. 16 tables, 2 maps.

See maps No. 703, and 704.

Out of print.

Cat. No. M32-701

- 702.—Mineral map of the Dominion of Canada. Revised in 1933. 100m : 1".

Accompanying report No. 738.

Out of print.

Cat. No. M32-702

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Reports and maps—Rapports.—*Continued—Suite.*

- 703.—Principal amber mica mines and occurrences in the province of Quebec; map, by H. S. Spence. 1929. 3.95m : 1".

Accompanying report No. 701.

Out of print.

Cat. No. M32-703

- 704.—Principal amber mica mines and occurrences in the province of Ontario; map, by H. S. Spence. 1929. 3.95m : 1".

Accompanying report No. 701.

Out of print.

Cat. No. M32-704

- 705.—Comparative tests of various fuels when burned in a domestic hot-water boiler, by E. S. Malloch and C. E. Baltzer. 1929. 92p. 5 pls., 6 charts, 6 figs., 10 tables.

15c.

Cat. No. M32-705

- 706.—Comparison of the cost and convenience of house heating with various fuels, by E. S. Malloch. 1929. 8p. 1 fig., 1 table. (Dominion Fuel Board No. 14.)

15c.

Cat. No. M32-706

- 707.—Chrysotile asbestos in Canada, by James Gordon Ross. 1931. 146p. 34 pls., 8 figs., 6 charts, 21 tables.

Voir le rapport n° 708 pour l'édition française.

Out of print.

Cat. No. M32-707

- 708.—Amiante chrysotile au Canada, par James Gordon Ross. 1934. 162p. 34 planches, 8 figures, 6 graphiques, 21 tableaux.

See report No. 707 for English edition.

Édition épuisée.

N° de cat. M32-708F

- 709.—Not published.

- 710.—Investigations of mineral resources and the mining industry, 1928. 1930. 57p. 2 pls., tables.

Contents.—Preliminary report on the limestones of northern and western Ontario and the Prairie Provinces, by M. F. Goudge.—Potash salts in the Maritime Provinces of Canada, by L. H. Cole.—Core drilling bituminous sands of northern Alberta, by S. C. Ells (see report No. 710-1).—Preliminary report on moulding sands in eastern Canada, by C. H. Freeman.

35c.

Cat. No. M32-710

- 710-1.—Core drilling bituminous sands of northern Alberta, by S. C. Ells. 1929. 26p. 4 pls., 1 fig., tables.

Advance section of report No. 710.

35c.

Cat. No. M32-710/1

- 711.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1928. 1930. 166p. 8 figs., 7 tables.

Contents.—(1) General review of investigations, by W. B. Timm.—Reports of investigations: (2) Ore Dressing and Metallurgical Laboratories, by C. S. Parsons, A. K. Anderson, and J. S. Godard:—(3) Non-metallics Laboratory, by R. K. Carnochan, C. S. Parsons, and R. A. Rogers:—(4) Hydrometallurgical Laboratory, by R. J. Traill, W. R. McClelland, and J. D. Johnston.—Report on the treatment of mixed (bulk) concentrates from base metal sulphide ores, by W. E. Harris.—(5) Report on the work and investigations of the Chemical Laboratories, by H. C. Mabee.—(6) The new Pyrometallurgical Laboratory of the Department of Mines, by W. B. Timm and T. W. Hardy.

75c.

Cat. No. M32-711

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Reports and maps—Rapports.—*Continued—Suite.*

- 712.—**Investigations of fuels and fuel testing** (Testing and Research Laboratories), 1928. 1930. 71p. 2 pls., 4 figs., tables.

Contents.—*General review of investigations, by B. F. Haanel and R. E. Gilmore.*—(1) *Report of preliminary carbonization and briquetting tests on lignite from northern Ontario, by R. A. Strong.*—(2) *Report on oil-shale from Pictou county, Nova Scotia, by A. A. Swinnerton.*—(3) *Laboratory notes, by J. H. H. Nicolls.*—(4) *Analyses of coals and other solid fuels, compiled by J. H. H. Nicolls and C. B. Mohr.*—(5) *Gasoline survey for 1928, by P. V. Rosewarne and R. J. Offord.*

35c.

Cat. No. M32-712

- 713.—**The Mining Laws of Canada:** a digest of Dominion and Provincial laws affecting mining. Revised edition, by A. Buisson. 1931. 98p.

See also reports No. 627, 795, 828, and 854.

Out of print.

Cat. No. M32-713

- 714.—**The gypsum industry of Canada**, by L. Heber Cole. 1930. 164p. 20 pls., 23 figs., 5 tables, 1 map.

See map No. 715.

Out of print.

Cat. No. M32-714

- 715.—**Gypsum occurrences in Canada; index map**, by L. H. Cole. 1930. 500m : 1".

Accompanying report No. 714.

Out of print.

Cat. No. M32-715

- 716.—**The salt industry of Canada**, by L. Heber Cole. 1930. 116p. 15 pls., 31 figs., 13 tables, 2 maps.

See maps No. 717 and 718.

30c.

Cat. No. M32-716

- 717.—**Saline springs and salt areas in Canada; index map**, by L. H. Cole. 1930. 500m : 1".

Accompanying report No. 716.

Out of print.

Cat. No. M32-717

- 718.—**Ontario-Michigan salt basin** showing probable limit of productive area; **map**, by L. H. Cole. 1930. 25m : 1".

Accompanying report No. 716.

Out of print.

Cat. No. M32-718

- 719.—**Investigations of mineral resources and the mining industry, 1929.** 1930. 69p. 5 pls., 7 figs., tables.

Contents.—(1) *The Wilberforce radium occurrence, by H. S. Spence and R. K. Carnochan.*—(2) *Notes on anhydrite, by L. H. Cole and R. A. Rogers.*—(3) *Bituminous sands of northern Alberta, operations during 1929, by S. C. Ells.*—(4) *Limestone in industry, by M. F. Goudge.*—(5) *Preliminary report on limestone of British Columbia, by M. F. Goudge.*

35c.

Cat. No. M32-719

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 720.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1929. 1931. 208p. 1 pl., 3 figs., tables.

Contents.—(1) *General review of investigations*, by W. B. Timm.—*Reports of investigations*: (2) *Metallic Ores Section*, by C. S. Parsons and others; (3) *Non-Metallic Minerals Section*, by R. K. Carnochan and R. A. Rogers; (4) *Hydro-metallurgical and Electrochemical Section*, by R. J. Traill and others; (5) *Iron and Steel Section*, by T. W. Hardy; (6) *Chemical Laboratories*, by H. C. Mabee.

35c.

Cat. No. M32-720

- 721.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1929. 1932. 131p. 8 pls., 8 figs., 14 tables.

Contents.—*General review of investigations*, by B. F. Haanel and R. E. Gilmore.—(1) *Report of tests on Sydney coal* (see report No. 721-1).—(2) *Notes on methods for the laboratory assay of coals for carbonization and for coking properties*, by R. E. Gilmore.—(3) *Coking indices of typical Canadian coals*, by J. H. H. Nicolls.—(4) *Analyses of coals and other solid fuels*, compiled by J. H. H. Nicolls and C. B. Mohr.—(5) *Gasoline survey for 1929* (see report No. 721-2).—(6) *The analysis of natural gas from the Turner Valley field* (see report No. 721-3).

35c.

Cat. No. M32-721

- 721-1.—Report of tests on Sydney coal in the Illingworth low-temperature carbonization retort, by R. A. Strong, and E. J. Burrough. 1931. 25p. 3 pls., 3 figs., 4 tables.

Advance section of report No. 721.

15c.

Cat. No. M32-721/1

- 721-2.—Gasoline survey for 1929, by P. V. Rosewarne and H. McD. Chantler. 1931. 22p. 2 pls., 1 fig., 10 tables.

Advance section of report No. 721.

15c.

Cat. No. M32-721/2

- 721-3.—The analysis of natural gas from the Turner Valley field in Alberta, by P. V. Rosewarne and R. J. Offord. 1931. 20p. 3 pls., 4 figs., 14 tables.

Advance section of report No. 721.

15c.

Cat. No. M32-721/3

- 722.—Investigations in ceramics and road materials (Testing and Research Laboratories), 1928-1929. 1931. 143p. 3 pls., 18 figs., tables.

Contents.—*Introduction by Howells Fréchette.*—**CERAMICS:** (1) *Ceramic bodies for electrical heating devices*; (2) *Transverse strength of ball clay-sand and ball clay-flint mixtures*; (3) *Production of grey brick*, by L. P. Collin;—(4) *Clays and shales of Prince Edward Island*, by Howells Fréchette and J. F. McMahon;—(5) *Progress report on clay gathering*, by J. F. McMahon;—(6) *The continuation of the investigation of the treatment of clays to overcome drying defects*; and (7) *Plant trials to overcome drying difficulties*, by J. G. Phillips.—**ROAD MATERIALS:** (8) *Road materials in Prince Edward Island*; and, (9) *Road gravels in Quebec*, by R. H. Picher; (10) *Lime treatment for gumbo roads*, by J. G. Phillips.

75c.

Cat. No. M32-722

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 723.—Investigations of mineral resources and the mining industry, 1930. 1931. 82p. 5 pls., 2 figs., 5 tables.

Contents.—(1) *Bituminous sands of northern Alberta* (see report No. 723-1).—(2) *Possible industrial applications for bentonite* (see report No. 723-2).—(3) *Petroleum and natural gas in eastern Canada*, by E. H. Wait.—*Diatomite—a general description of its character and industrial uses*, by V. L. Eardley-Wilmot.—*The possibilities and prospects for the utilization of Canadian-produced copper in home manufacturing industries*, by A. H. A. Robinson and W. H. Losee.

Out of print.

Cat. No. M32-723

- 723-1.—*Bituminous sands of northern Alberta: operations during 1930*, by S. C. Ells. 1931. 11p. 3 pls., 2 figs.

Advance section of report No. 723.

Out of print.

Cat. No. M32-723/1

- 723-2.—*Possible industrial applications for bentonite*, by H. S. Spence and Margaret Light. 1931. 24p.

Advance section of report No. 723.

15c.

Cat. No. M32-723/2

- 724.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1930. 1932. 215p. Tables.

Contents.—(1) *General review of investigations*, by W. B. Timm.—*Reports of investigations: (2) Metallic Ores Section*, by C. S. Parsons, and others; (3) *Non-metallic Minerals Section*, by R. K. Carnochan and others; (4) *Section of Ferrous Metallurgy*, by T. W. Hardy, H. H. Bleakney, and W. S. Jenkins.—*Report of the Chemical Laboratories*, by H. C. Mabey.

75c.

Cat. No. M32-724

- 725.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1930 and 1931. 1933. 166p. 3 pls., 17 figs., 4 charts, tables.

Contents.—*General review of investigations*, by B. F. Haanel and R. E. Gilmore.—PART I: SOLID FUELS: (1) *Summary of tests on British Columbia coals* (see report No. 725-3); (2) *Results of twenty-eight hand and stoker-fired boiler trials* (see report No. 725-3); (3) *Classification of coals using specific volatile index* (see report No. 725-2); (4) *Analyses of solid fuels* (see report No. 725-4).—PART II: NATURAL GAS AND LIQUID FUELS: (1) *Analysis of natural gas* (see report No. 725-5); (2) *Weathering of crude naphtha in Turner Valley* (see report No. 725-5); (3) *Experiments on the hydrogenation of Alberta bitumen* (see reports 725-1 and 725-5); (4) *Report on oil shales from New Glasgow area* (see report No. 725-5); (5) *Gasoline surveys* (see report No. 725-5).

75c.

Cat. No. M32-725

- 725-1.—*Experiments on the hydrogenation of Alberta bitumen and on the effect of pressure on the pyrolysis of methane*, by T. E. Warren. 1932. 21p. 2 pls., 12 figs., 4 tables.

Advance section of report No. 725.

35c.

Cat. No. M32-725/1

- 725-2.—*Classification of coals using specific volatile index*, by E. J. Burrough, E. Swartzman, and R. A. Strong. 1933. Pp. 36-50. 4 charts, tables.

Advance section of report No. 725.

15c.

Cat. No. M32-725/2

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 725-3.—Boiler tests on coals and other solid fuels. 1933. Pp. 17-35. 1 pl., tables.

Contents.—*Summary of tests on British Columbia coals when used as pulverized fuel*, by E. S. Malloch.—*Notes on pulverized fuel fired steam generators versus other types*, by B. F. Haanel.—*Results of twenty-eight hand and stoker fired boiler trials made with various fuels on a patented grate*, by E. S. Malloch and C. E. Baltzer.

Reprint of Sections I and II, (Part I) of report No. 725.

15c.

Cat. No. M32-725/3

- 725-4.—Analyses of solid fuels, compiled by J. H. H. Nicolls and C. B. Mohr. 1933. Pp. 51-91. 3 tables.

Reprint of section IV, (Part I) of report No. 725.

35c.

Cat. No. M32-725/4

- 725-5.—Natural gas and liquid fuels. 1933. Pp. 92-162. 2 pls., figs., tables.

Contents.—*Analyses of natural gas during 1930 and 1931*, by P. V. Rosewarne and R. J. Offord.—*Weathering of crude naphtha in Turner Valley*, by P. V. Rosewarne and W. P. Campbell.—*Experiments on the hydrogenation of Alberta bitumen (see report No. 725-1)*.—*Report on oil shales from New Glasgow area, Pictou county, Nova Scotia, and from Port Daniel, Bonaventure county, Quebec*, by A. A. Swinnerton.—*Gasoline surveys for 1930 and 1931*, by H. McD. Chantier.

Reprint of Part II of report No. 725.

35c.

Cat. No. M32-725/5

- 726.—Investigations in ceramics and road materials (Testing and Research Laboratories), 1930 and 1931. 1933. 175p. 1 pl., 28 figs., 6 tables.

Contents.—*Introduction by Howells Fréchette*.—**CERAMICS:** *Ceramic bodies for electrical heating devices*; (2) *Colour control of brick*, by L. P. Collin; (3) *Roofing-tile clays and shales of eastern Canada*, by J. F. McMahon; (4) *The production of shapes from soapstone dust*; (5) *The continuation of the investigation of the treatment of clays to overcome drying defects*, by J. G. Phillips.—**ROAD MATERIALS:** (6) *Road gravels in Quebec*, by R. H. Picher.—*Bibliography*.

75c.

Cat. No. M32-726

- 727.—Investigations of mineral resources and the mining industry, 1931. 1932. 153p. 36 pls., 7 figs., tables.

Contents.—(1) *The suitability of certain Canadian sands for use in sandblasting (see report No. 727-1)*.—(2) *Helium in Canada from 1926 to 1931 (see report No. 727-2)*.—(3) *The pitchblende and silver discoveries of Great Bear lake (see report No. 727-3)*.—(4) *Raw materials for the manufacture of rock wool in the Niagara peninsula, Ont.*, by M. F. Goudge.—(5) *Exploration of bituminous sand areas in northern Alberta*; (6) *Recent progress in the commercial separation of bitumen from bituminous sand*; (7) *Estimated cost of producing solid and liquid hydrocarbons from bituminous sand*, by S. C. Ellis.—(8) *Quartzite from Sunnybrae, Pictou county, Nova Scotia*, by L. H. Cole and J. F. McMahon.

Out of print.

Cat. No. M32-727

- 727-1.—The suitability of certain Canadian sands for use in sandblasting, by L. H. Cole, R. K. Carnochan, and W. E. Brissenden. 1931. 41p. 15 pls., tables.

Advance section of report No. 727.

Out of print.

Cat. No. M32-727/1

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—*Continued—Suite.*

727-2.—**Helium in Canada from 1926 to 1931**, by P. V. Rosewarne. 1931. 13p. Tables.

Advance section of report No. 727.

15c.

Cat. No. M32-727/2

727-3.—**The pitchblende and silver discoveries at Great Bear Lake**, Northwest Territories, by H. S. Spence. 1932. Pp. 55-92. 11 pls., figs., tables.

Contents.—(a) *Radium-bearing minerals from Great Bear Lake, Northwest Territories.*—(b) *Occurrences of pitchblende and silver ores at Great Bear Lake, N.W.T.*—(c) *Final report on field investigations during 1931, in Labine Point area, N.W.T.*

Reprinted from report No. 727.

Out of print.

Cat. No. M32-727/3

728.—**Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1931.** 1932. 183p. 2 pls., 4 figs., tables.

Contents.—(1) *General review of investigations*, by W. B. Timm.—*Reports of investigations:* (2) *Metallic Ores Section*, by S. C. Parsons, A. K. Anderson, and J. S. Godard; (3) *Non-metallic Minerals Section*, by R. K. Carnochan, R. A. Rogers, L. H. Cole; (4) *Section of Hydrometallurgy and Electrochemistry*, by R. J. Traill, W. R. McClelland; (5) *Section of Ferrous Metallurgy*, by T. W. Hardy and others; (6) *Chemical Laboratory Section*, by H. C. Mabee.

75c.

Cat. No. M32-728

729.—**The clay and shale resources of Turner Valley and nearby districts**, by W. G. Worcester. 1932. 126p. 8 pls., 29 figs., tables.

30c.

Cat. No. M32-729

730.—**Gold in Canada**, by A. H. A. Robinson. 1932. 92p. 8 figs., tables.

35c.

Cat. No. M32-730

731.—**Feldspar**, by Hugh S. Spence. 1932. 145p. 13 pls., 16 figs., tables, 7 maps.

Out of print.

Cat. No. M32-731

732.—**Anhydrite in Canada: occurrence, properties, and utilization**, by L. Heber Cole and R. A. Rogers. 1933. 89p. 5 pls., 9 figs., tables.

30c.

Cat. No. M32-732

733.—**Canadian limestone for building purposes**, by M. F. Goudge. 1933. 196p. 40 pls., 11 figs., 6 tables.

Voir le rapport n° 778 pour l'édition française.

45c.

Cat. No. M32-733

734.—**Gold in Canada, 1933**, by A. H. A. Robinson. Revised edition. 1933. 92p. 8 figs., 39 tables.

See also report No. 730.

35c.

Cat. No. M32-734

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 735.—Investigations of mineral resources and the mining industry, 1932. 1934. 31p. 1 pl., 5 figs., 10 tables.**

Contents.—(1) *Silica deposit near Gatineau Point, Quebec*, by L. H. Cole and R. K. Carnochan.—(2) *Sandstone at Hawkesbury, Ont.*, by L. H. Cole.—(3) *Some economic aspects of the bituminous sands of northern Alberta*, by S. C. Ellis.

35c.

Cat. No. M32-735

- 736.—Investigations in ore dressing and metallurgy, (Testing and Research Laboratories), 1932. 1934. 287p. 2 pls., 14 figs., tables.**

Contents.—(1) *General review of investigations*, by W. B. Timm.—*Reports of investigations*: (2) *Metallic Ores Section*, by C. S. Parsons, and others; (3) *Non-metallic Minerals Section*, by R. K. Carnochan and R. A. Rogers; (4) *Section of Hydrometallurgy and Electrochemistry*, by R. J. Traill and W. R. McClelland; (5) *Section of Ferrous Metallurgy*, by T. W. Hardy and H. H. Bleakney; (6) *Chemical Laboratory Section*, by H. C. Mabee.

Out of print.

Cat. No. M32-736

- 737.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1932. 1934. 155p. 7 pls., 10 figs., 8 charts, tables.**

Contents.—*General review of investigations*, by B. F. Haanel and R. E. Gilmore.—(1) *Anthracite and coke analysis survey (see report No. 737-5)*.—(2) *The F. R. L. method for rating the grindability or pulverizability of coal (see report No. 737-1)*.—(3) *A laboratory test on coals (see report No. 737-2)*.—(4) *Changes in forms of sulphur in coal under various conditions of weathering*, by J. H. H. Nicolls and E. Swartzman.—(5) *Coal free from inorganic mineral matter for the purpose of classification*, by J. H. H. Nicolls and E. Swartzman.—(6) *Batch experiments on the hydrogenation and cracking of low-temperature coal tar (see report No. 737-3)*.—(7) *Description of an apparatus for continuous hydrogenation of experiments on coal tar (see report No. 737-3)*.—(8) *A study of the natural gas and naphtha products (see report No. 737-4)*.—(9) *Gasoline survey for 1932*, by H. McD. Chanler.

75c.

Cat. No. M32-737

- 737-1.—A method for rating the grindability or pulverizability of coal, developed by the Fuel Research Laboratories (F.R.L.), Department of Mines, Canada, (correlated with the "Cross" and "Hardgrove" methods), by C. E. Baltzer and H. P. Hudson. 1933. 17p. 1 pl., tables.**

Advance section of report No. 737.

15c.

Cat. No. M32-737/1

- 737-2.—A laboratory test on coals for predicting the physical properties of the resultant by-product coke, by E. Swartzman, E. J. Burrough, and R. A. Strong. 1933. 24p. 2 pls., 1 fig., 8 charts, 5 tables.**

Advance section of report No. 737.

15c.

Cat. No. M32-737/2

- 737-3.—Report of experimental work on the hydrogenation of Canadian coal, coal tar, and bitumen for the production of motor fuel. 1933. 31p. 4 pls., 2 figs.**

Contents.—(1) *Batch experiments on the hydrogenation and cracking of low-temperature coal tar*, by T. E. Warren and A. R. Williams.—(2) *Description of an apparatus for continuous hydrogenation, and of experiments on coal tar, bitumen, and a suspension of powdered coal in coal tar*, by T. E. Warren and K. W. Bowles.

Advance section of report No. 737.

Out of print.

Cat. No. M32-737/3

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—*Continued—Suite.*

- 737-4.—**A study of the natural gas and naphtha products from twenty-four wells in Turner Valley, Alberta**, by P. V. Rosewarne, W. P. Campbell, and R. J. Offord. 1933. 22p. 5 figs., 15 tables.

Advance section of report No. 737.

Out of print.

Cat. No. M32-737/4

- 737-5.—**Anthracite and coke analysis survey conducted at the Fuel Research Laboratories**. 1933. 13p. 3 tables.

Advance section of report No. 737.

Out of print.

Cat. No. M32-737/5

- 738.—**The mineral industries of Canada, 1933**, compiled by A. H. A. Robinson with the co-operation of the Staff of the Mines Branch. 1934. 116p. 34 pls., tables, 1 map.

Voir le rapport n° 739 pour l'édition française. See map No. 702.

35c.

Cat. No. M32-738

- 739.—**Les industries minérales du Canada, 1933**, compilation par A. H. A. Robinson avec la coopération du personnel de la Division des mines. 1934. 123p. 34 planches, tableaux, 1 carte.

See report No. 738 for English edition.

Édition épuisée.

N° de cat. M32-739F

- 740.—**Nova Scotia; index map showing limestone resources**, by M. F. Goudge. 1934. 12½m : 1".

Accompanying report No. 742.

Out of print.

Cat. No. M32-740

- 741.—**New Brunswick; index map showing limestone resources**, by M. F. Goudge. 1934. 12½m : 1".

Accompanying report No. 742.

35c.

Cat. No. M32-741

- 742.—**Limestones of Canada: their occurrence and characteristics. Part II: Maritime Provinces**, by M. F. Goudge. 1934. 186p. 29 pls., 12 figs., 8 tables, 2 maps.

See maps No. 740 and 741. See also reports No. 682, 733, 755, 781, and 811.

75c.

Cat. No. M32-742

- 743.—**Investigations in ore dressing and metallurgy, (Testing and Research Laboratories), January to June, 1933**, by W. B. Timm and associates. 1934. 157p. 4 pls., 5 figs., tables.

Contents.—*Investigation No. 483-510.*

75c.

Cat. No. M32-743

- 744.—**Investigations in ore dressing and metallurgy, (Testing and Research Laboratories), July to December, 1933**, by W. B. Timm and associates. 1934. 194p. Tables.

Contents.—*General review of investigations, by W. B. Timm.—Investigation No. 511-550.*

75c.

Cat. No. M32-744

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 745.—**Petroleum fuels in Canada: deliveries for consumption, calendar years 1930-1931-1932**, by J. M. Casey. 1934. 11p. 7 tables.
Issued in co-operation with the Dominion Fuel Board.

Out of print.

Cat. No. M32-745

- 746.—**Gasoline survey for 1933**, by H. McD. Chantler. 1934. 21p. 1 fig., 12 tables.

15c.

Cat. No. M32-746

- 747.—**Investigations in ore dressing and metallurgy** (Testing and Research Laboratories), **January to June, 1934**, by W. B. Timm and associates. 1935. 209p. 1 fig., tables.

Contents.—*General review of investigations*, by W. B. Timm.—*Investigations No. 551-580.*

75c.

Cat. No. M32-747

- 748.—**Investigations in ore dressing and metallurgy**, (Testing and Research Laboratories), **July to December, 1934**, by W. B. Timm and associates. 1936. 202p. 2 pls., 3 figs., tables.

Contents.—*General review of investigations*, by W. B. Timm.—*Investigations No. 581-608.*

75c.

Cat. No. M32-748

- 749.—**The mineral industries of Canada, 1933**, (abridged edition), compiled by A. H. A. Robinson. 1934. 39p.

Voir le rapport n° 750 pour l'édition française. See also report No. 738.

Free.

Cat. No. M32-749

- 750.—**Les industries minérales du Canada, 1933**, (édition abrégée), compilation par A. H. A. Robinson. 1934. 40p.

See report No. 749 for English edition. Voir aussi le rapport n° 739.

Gratuit.

N° de cat. M32-750F

- 751.—**Road gravels in Quebec**, by R. H. Picher. 1935. 214p. Tables.
Voir le rapport n° 752 pour l'édition française.

75c.

Cat. No. M32-751

- 752.—**Graviers de voirie dans la province de Québec**, par R. H. Picher. 1935. 241p. Tableaux.

See report No. 751 for English edition.

Édition épuisée.

N° de cat. M32-752F

- 753.—**Analyses of coals and other solid fuels, 1932, 1933, and 1934**, compiled by J. H. H. Nicolls and C. B. Mohr. 1935. 58 p. Tables.

15c.

Cat. No. M32-753

- 754.—**A study of clay winning and its costs in the provinces of Ontario and Quebec**, by J. F. McMahon. 1935. 90p. 19 pls., 3 figs., 4 tables.

35c.

Cat. No. M32-754

- 755.—**Limestones of Canada; their occurrence and characteristics. Part III: Quebec**, by M. F. Goudge. 1935. Reprinted, 1962. 274p.

Illus., tables, figs., maps (2 folded in pocket).

Voir le rapport n° 758 pour l'édition française. See maps No. 756 and 757. See also reports No. 682, 733, 742, 781, and 811.

\$2.50.

Cat. No. M32-755

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—*Continued—Suite.*

- 756.—**Montreal district; map showing distribution of limestone and location of quarries**, by M. F. Goudge. 1935. 6000' : 1".
Accompanying report No. 755.
Out of print. *Cat. No. M32-756*
- 757.—**Part of southern Quebec; map showing limestone resources**, by M. F. Goudge. 1935. 8m : 1".
Accompanying report No. 755.
Out of print. *Cat. No. M32-757*
- 758.—**Les calcaires du Canada: gisements et caractéristiques. Partie III: Québec**, par M. F. Goudge. 1935. 294p. 36 planches, 13 figures, 4 tableaux, 2 cartes.
See report No. 755 for English edition. Voir aussi rapports n° 683 et 778.
Édition épuisée. *N° de cat. M32-758F*
- 759.—**Petroleum fuels in Canada, deliveries for consumption, calendar year 1933**, by J. M. Casey. 1935. 12p. 8 tables.
Issued in co-operation with the Dominion Fuel Board.
15c. *Cat. No. M32-759*
- 760.—**The Canadian mineral industry in 1934**. 1935. 119p.
Prepared in the Mineral Resources Division.
Out of print. *Cat. No. M32-760*
- 761.—**Wood fuel burning tests**, by E. S. Malloch and C. E. Baltzer. 1935. 6p. 1 pl., 1 fig., 1 table.
A report on tests conducted at the Fuel Research Laboratories, Dept. of Mines, in co-operation with the Forest Products Laboratories of Canada, Dept. of Interior.
15c. *Cat. No. M32-761*
- 762.—**Coal friability tests: a comparative study of methods for determining the friability of coal and suggestions for tumbler and drop shatter test methods**, by R. E. Gilmore, J. H. H. Nicolls, and G. P. Connell. 1935. 102p. 4 pls., 9 figs., 26 tables.
Appendices.—(1) *Tumbler test for coal*.—(2) *Drop shatter test for coal*.
35c. *Cat. No. M32-762*
- 763.—**Investigations in ore dressing and metallurgy (Testing and Research Laboratories), January to June, 1935**, by W. B. Timm and associates. 1936. 237p. 1 pl., tables.
Contents.—*Review of investigations, by W. B. Timm.—Investigations No. 609-635 the results of which are recorded in detail.—Investigations the results of which are synopsisized.*
75c. *Cat. No. M32-763*
- 764.—**Gasoline survey for 1934**, by H. McD. Chantler. 1935. 22p. 1 fig., 14 tables.
15c. *Cat. No. M32-764*
- 765.—**Analyses of Canadian crude oils, naphthas, shale oil, and bitumen**, by P. V. Rosewarne, H. McD. Chantler, and A. A. Swinerton. 1936. 21p. 2 pls., 3 figs., 6 tables.
15c. *Cat. No. M32-765*

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 766.—**Laboratory tests on structural assemblies of brick and tile**, by L. P. Collin. 1935. 33p. 2 pls., 1 fig., tables.

Contents.—*Part I: The tensile and shear strength of assemblies of various types of brick with commonly used mortars.—Part II: Effect of absorption of tile on the adhesion and strength of concrete beams of different widths.*

15c.

Cat. No. M32-766

- 767.—**Natural bonded moulding sands of Canada**, by Correll H. Freeman. 1936. 144p. 11 pls., 7 figs., 15 tables.

Voir le rapport n° 768 pour l'édition française.

35c.

Cat. No. M32-767

- 768.—**Les sables naturels de moulage au Canada**, par Correll H. Freeman. 1936. 11 planches, 7 figures, 15 tableaux.

See report No. 767 for English edition.

35c.

N° de cat. M32-768F

- 769.—**Gold in Canada, 1935**, by A. H. A. Robinson, 3rd edition. 1935. 127p. 7 figs., tables.

Voir le rapport n° 770 pour l'édition française.

35c.

Cat. No. M32-769

- 770.—**L'or au Canada, 1935**, par A. H. A. Robinson, 3e édition. 1936. 133p. 7 figures, tableaux.

See report No. 769 for English edition.

Édition épuisée.

N° de cat. M32-770F

- 771.—**Investigations in ore dressing and metallurgy (Testing and Research Laboratories), July to December, 1935.**, by W. B. Timm and associates. 1937. 234p. Tables.

Contents.—*Review of investigations, by W. B. Timm.—Investigations No. 636-663 the results of which are recorded in detail.—Investigations the results of which are synopsized.*

75c.

Cat. No. M32-771

- 772.—**Petroleum fuels in Canada, deliveries for consumption, calendar year 1934**, by J. M. Casey. 1936. 20p. 1 fig., tables.

Issued in co-operation with the Dominion Fuel Board.

15c.

Cat. No. M32-772

- 773.—**The Canadian mineral industry in 1935.** 100p. Graphs.

35c.

Cat. No. M32-773

- 774.—**Investigations in ore dressing and metallurgy (Testing and Research Laboratories), January to June, 1936**, by W. B. Timm and associates. 1937. 186p. 3 pls., tables.

Contents.—*Review of investigations, by W. B. Timm.—Investigations No. 665-683 the results of which are recorded in detail.—Investigations the results of which are synopsized.*

75c.

Cat. No. M32-774

- 775.—**Fuel briquetting**, by R. A. Strong, E. Swartzman, and E. J. Burrough. 1937. 100p. 5 pls., 2 figs., 13 tables.

35c.

Cat. No. M32-775

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 776.—**Investigations in ore dressing and metallurgy** (Testing and Research Laboratories), **July to December, 1936.** 204p. 10 figs.

Contents.—Review of investigations, by C. S. Parsons.—Investigations No. 684-703 the results of which are recorded in detail.—Investigations the results of which are synopsized.

75c.

Cat. No. M32-776

- 777.—**Catalogue and index of Mines Branch reports.** 16th edition. 1937. 83p.

Out of print.

Cat. No. M32-777

- 778.—**Les calcaires de construction au Canada**, par M. F. Goudge. 1937. 212p. 40 planches, 11 figures, tableaux.

See report No. 733 for English edition. Voir aussi rapports n° 683 et 758.

45c.

N° de cat. M32-778F

- 779.—**Analyses of coals and other solid fuels, 1934 to 1936**, compiled by J. H. H. Nicolls and C. B. Mohr. 1937. 139p. Tables.

Appendices.—(1) Analyses of coals and peats, 1918 to 1925, hitherto unpublished.—(2) Analyses of ash from coals, cokes, peat, and woods.

35c.

Cat. No. M32-779

- 780.—**Petroleum fuels in Canada, deliveries for consumption, calendar year 1935.** by J. M. Casey. 1937. 20p. 1 fig., tables.

Issued in co-operation with the Dominion Fuel Board.

15c.

Cat. No. M32-780

- 781.—**Limestones of Canada; their occurrence and characteristics. Part IV: Ontario**, by M. F. Goudge. 1938. 362p. 46 pls., 10 figs., tables, 2 maps.

See maps No. 782 and 783. See also reports No. 682, 733, 742, 755, and 811.

\$1

Cat. No. M32-781

- 782.—**Distribution of limestone in eastern and central Ontario; map**, by M. F. Goudge. 1937. 4400' : 1".

Accompanying report No. 781.

35c.

Cat. No. M32-782

- 783.—**Distribution of limestone in southwestern Ontario; map**, by M. F. Goudge. 1937. 4400' : 1".

Accompanying report No. 781.

35c.

Cat. No. M32-783

- 784.—Not published.

- 785.—**Investigations in ore dressing and metallurgy** (Testing and Research Laboratories), **January to June, 1937**, by C. S. Parsons and associates. 1938. 158p. Tables.

Contents.—Review of investigations, by C. S. Parsons.—Investigations No. 704-716 the results of which are recorded in detail.—Investigations the results of which are synopsized.

75c.

Cat. No. M32-785

- 786.—**The Canadian mineral industry in 1936.** 1937. 78p. Graphs.

Out of print.

Cat. No. M32-786

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 787.—**Gasoline surveys for 1935 and 1936**, by P. V. Rosewarne and H. McD. Chantler. 1937. 40p. 2 figs., 11 tables.

35c.

Cat. No. M32-787

- 788.—**Investigations in ore dressing and metallurgy** (Testing and Research Laboratories), **July to December, 1937**, by C. S. Parsons and associates, 1938. 137 p. 3 pls., tables.

Contents.—*Review of investigations, by C. S. Parsons.*—*Investigations No. 717-731 the results of which are recorded in detail.*—*Investigations the details of which are not published.*—*A résumé of special research completed, in progress, or under consideration.*

75c.

Cat. No. M32-788

- 789.—**Petroleum fuels in Canada, deliveries for consumption, calendar year 1936**, by J. M. Casey. 1938. 20p. 1 fig., 16 tables.

Issued in co-operation with the Dominion Fuel Board.

15c.

Cat. No. M32-789

- 790.—**Comparative pulverized fuel boiler tests on British Columbia and Alberta coals, and on Ontario lignite**, by C. E. Baltzer and E. S. Malloch. 1938. 54p. 1 pl., 2 figs., tables.

35c.

Cat. No. M32-790

- 791.—**The Canadian mineral industry in 1937**. 1938. 99p. pls., graphs, tables.

On cover: The Mineral Industry of Canada. 1937.

35c.

Cat. No. M32-791

- 792.—**Investigations in ore dressing and metallurgy** (Testing and Research Laboratories), **January to June, 1938**, by C. S. Parsons and associates. 1939. 147p. 1 pl., 2 figs., tables.

Contents.—*Review of investigations, by C. S. Parsons.*—*Investigations No. 732-747 the results of which are recorded in detail.*—*Investigations the details of which are not published.*—*Résumé of special investigations and research completed, in progress, or under consideration.*

75c.

Cat. No. M32-792

- 793.—**Improving the properties of clays and shales**, by J. G. Phillips. 1938. 39p. 3 pls., 16 figs., 6 tables.

35c.

Cat. No. M32-793

- 794.—**Petroleum fuels in Canada, deliveries for consumption, calendar year 1937**, by J. M. Casey. 1939. 20p. 1 fig., 16 tables.

Issued in co-operation with the Dominion Fuel Board.

15c.

Cat. No. M32-794

- 795.—**The mining laws of Canada: a digest of Dominion and Provincial laws affecting mining**, compiled by A. Buisson. 3rd revised edition. 1939. 110p.

See also reports No. 627, 713, 828, and 854.

Out of print.

Cat. No. M32-795

- 796.—**Gasoline surveys for 1937 and 1938**, by P. V. Rosewarne and H. McD. Chantler. 1939. 20p. 2 figs., 8 tables.

15c.

Cat. No. M32-796

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 797.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), July to December, 1938, by C. S. Parsons and associates. 1940. 131p. 2 figs., tables.

Contents.—Review of investigations, by C. S. Parsons.—Investigations No. 748-761 the results of which are recorded in detail.—Investigations the details of which are not published.—Résumé of special investigations and research completed, in progress, or under consideration.

75c.

Cat. No. M32-797

- 798.—Tests on the liquefaction of Canadian coals by hydrogenation, by T. E. Warren and K. W. Bowles. 1940. 106p. 4 pls., 3 figs., 6 tables.

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Cat. No. M32-798

- 799.—Mineral map of the Dominion of Canada. 1939. 100m : 1".

Out of print.

Cat. No. M32-799

- 800.—Stabilized roads, by R. H. Picher. 1940. 37p. 3 pls., 1 fig.

Voir le rapport n° 801 pour l'édition française.

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Cat. No. M32-800

- 801.—La stabilisation des routes, par R. H. Picher. 1940. 45p. 3 planches, graphique.

See report No. 800 for English edition.

35c.

N° de cat. M32-801F

- 802.—Comparative tests of various fuels when burned in a domestic hot-water boiler, 1935 to 1938, by C. E. Baltzer and E. S. Malloch. 1940. 23p. 1 pl., 3 figs., tables.

35c.

Cat. No. M32-802

- 803.—Talc, steatite, and soapstone; pyrophyllite, by Hugh S. Spence. 1940. 146p. 8 pls., 4 figs., tables.

75c.

Cat. No. M32-803

- 804.—The Canadian mineral industry in 1938. 1939. 101p. Graphs.

Out of print.

Cat. No. M32-804

- 805.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), January to June, 1939, by C. S. Parsons and associates. 1940. 195p. 1 pl., 5 figs.

Contents.—Review of investigations, by C. S. Parsons.—Investigations No. 762-774 the results of which are recorded in detail.—Investigations the details of which are not published.—The activities of the chemical, mineralogical, physical testing and heat-treating laboratories, the analyses and tests made, including miscellaneous items, tests, and sampling jobs.—Résumé of special investigations and research completed, in progress, or under consideration.

75c.

Cat. No. M32-805

- 806.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), July to December, 1939, by C. S. Parsons and associates. 1941. 116p. 2 pls.

Contents.—Review of investigations, by C. S. Parsons.—Investigation: No. 775-787 the results of which are recorded in detail.—Investigations the details of which are not published.—Reports on the activities of the chemical, mineralogical, physical testing and heat-treating laboratories.—A résumé of special investigations and research completed, in progress, or under consideration.

35c.

Cat. No. M32-806

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 807.—**Industrial waters of Canada; report on investigations, 1934 to 1940**, by Harald A. Leverin. 1942. 112p. 4 figs., 6 tables.
35c. *Cat. No. M32-807*
- 808.—**Petroleum fuels in Canada, deliveries for consumption, calendar years 1927-1940**, by J. M. Casey. 1942. 31p. 32 tables.
15c. *Cat. No. M32-808*
- 809.—**Peat moss or sphagnum moss; its uses in agriculture, in industry, and in the home**, by Harald A. Leverin. 1943. 10p.
Voir le rapport n° 810 pour l'édition française.
15c. *Cat. No. M32-809*
- 810.—**Tourbe de mousse ou mousse de sphaigne; ses usages en agriculture, dans l'industrie et au foyer**, par Harald A. Leverin. 1943. 12p.
See report No. 809 for English edition.
15c. *N° de cat. M32-810F*
- 811.—**Limestones of Canada; their occurrence and characteristics. Part V: Western Canada**, by M. F. Goudge. 1946. 233p. 40 pls., 6 figs., 12 tables, 2 maps.
See maps No. 812 and 813. See also reports No. 682, 733, 742, 755, and 781.
75c. *Cat. No. M32-811*
- 812.—**Southern British Columbia and southeastern Alberta; map showing distribution of limestone and location of quarries**, by M. F. Goudge. 1945. 24m : 1".
Accompanying report No. 811.
Out of print. *Cat. No. M32-812*
- 813.—**Central and southern Manitoba; map showing distribution of limestone and location of quarries**, by M. F. Goudge. 1945. 20m : 1".
Accompanying report No. 811.
Out of print. *Cat. No. M32-813*
- 814.—**Petroleum fuels in Canada, deliveries for consumption, calendar years 1940-1944**, by J. M. Casey. 1945. 25p. Tables.
15c. *Cat. No. M32-814*
- 815.—**The Canadian mineral industry in 1944**. 1945. 102p.
Out of print. *Cat. No. M32-815*
- 816.—**The physical properties of Canadian building brick**, by J. G. Phillips. 1947. 102p. 4 pls., 18 tables, 3 graphs. Bilingual.
35c. *Cat. No. M32-816*
- 816.—**Les propriétés physiques de la brique canadienne de construction**, par J. G. Phillips. 1947. 102p. 4 planches, 18 tableaux, 3 graphiques. Bilingue.
35c. *N° de cat. M32-816*
- 817.—**Peat moss deposits in Canada**, by Harald A. Leverin. 1946. 102p. 9 pls., 10 figs.
Voir le rapport n° 821 pour l'édition française.
35c. *Cat. No. M32-817*

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—*Continued—Suite.*

- 818.—**Catalogue and index of Bureau of Mines reports.** 17th edition. 1946. 66p.
Out of print. *Cat. No. M32-818*
- 819.—**Industrial waters of Canada; report of investigations, 1934 to 1943,** by Harald A. Leverin. Revised edition, 1947. 109p. 4 figs., 6 tables.
See also report No. 807.
Out of print. *Cat. No. M32-819*
- 820.—**The Canadian mineral industry in 1945.** 1946. 103p. Tables. 35c. *Cat. No. M32-820*
- 821.—**Les dépôts de tourbe de mousse au Canada,** par Harald A. Leverin. 1947. 115p. 9 planches, 10 figures, tableaux.
See report No. 817 for English edition.
35c. *N° de cat. M32-821F*
- 822.—**The physical properties of Canadian structural tile,** (made from clay or shale), by J. G. Phillips and G. A. Kirkendale. 1947. 12p. 4 pls., 2 graphs, 4 tables.
Voir le rapport n° 823 pour l'édition française.
15c. *Cat. No. M32-822*
- 823.—**Les propriétés physiques de la tuile canadienne de construction** (faite d'argile ou de schiste), par J. G. Phillips et G. A. Kirkendale. 1947. 12p. 7 planches, 2 graphiques, 4 tableaux.
See report No. 822 for English edition.
15c. *N° de cat. M32-823F*
- 824.—**The Canadian mineral industry in 1946.** 1948. 137p. Tables. 35c. *Cat. No. M32-824*
- 825.—**Summary of investigations on New Brunswick oil shales,** conducted by the Mines and Geology Branch, under Agreement (1942), with the Province of New Brunswick. 1948. 24p. 5 pls., 5 maps in pocket. 25c. *Cat. No. M32-825*
- 826.—**Drilling and sampling of bituminous sands of northern Alberta.** Results of investigations 1942-1947. 1949.

Vol. 1.—**Results of investigations.** 39p. 3 pls., 2 figs., tables. 35c. *Cat. No. M32-826/1*

Vol. 2.—**Detailed drilling and sampling records.** 670p. \$6.50 *Cat. No. M32-826/2*

Vol. 3.—**Cross-sections and plans of areas drilled.** 79p. Out of print. *Cat. No. M32-826/3*
- 827.—**The Canadian mineral industry in 1947.** 1949. 134p. Tables. 35c. *Cat. No. M32-827*

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 828.—**The mining laws of Canada**, a digest of Dominion and Provincial laws and regulations affecting mining, by A. Buisson. 4th edition. 1950. 133p.
See also reports No. 627, 713, 795, 854.
75c. *Cat. No. M32-828*
- 829.—**The Canadian mineral industry in 1948**. 1950. 126p. Tables.
35c. *Cat. No. M32-829*
- 830.—**The Canadian mineral industry in 1949**. 1951. 128p. Tables.
35c. *Cat. No. M32-830*
- 831.—**Analyses of Canadian coals and peat fuels**, with appendix containing supplementary coal ash chemical analyses, by J. H. H. Nicolls. 1952. 409p. Tables.
75c. *Cat. No. M32-831*
- 832.—**Analyses of Canadian crude oils**, by H. McD. Chantler, P. B. Seely, and F. E. Goodspeed. 1951. 90p. Tables.
75c. *Cat. No. M32-832*
- 833.—**Industrial water resources of Canada**. Water survey report series.
No. 1.—**Scope, procedure, and interpretation of survey studies**, by J. F. J. Thomas. 1953. 69p. 5 figs., 11 tables.
\$1 *Cat. No. M32-833*
- 834.—**Industrial water resources of Canada**. Water survey report series.
No. 2.—**Ottawa River drainage basin, 1947-48**, by J. F. J. Thomas. 1952. 144p. 5 graphs, 12 tables, 2 maps (not numbered).
\$1 *Cat. No. M32-834*
- 835.—**The Canadian mineral industry in 1950**. 1953. 148p. Tables.
Voir le rapport n° 840 pour l'édition française.
35c. *Cat. No. M32-835*
- 836.—**Analysis directory of Canadian coals**, by E. Swartzman. 2nd edition (1953). 1954. 204p. Charts, tables, 6 maps (not numbered).
See also reports No. 831 and 850.
\$3.25 *Cat. No. M32-836*
- 837.—**Industrial water resources of Canada**. Water survey report series.
No. 3.—**Upper St. Lawrence river-Central Great Lakes drainage basin in Canada**, by J. F. J. Thomas. 1954. 212p. 9 figs., 7 tables, 2 maps (not numbered).
\$2 *Cat. No. M32-837*
- 838.—**Industrial water resources of Canada**. Water survey report series.
No. 4.—**Columbia river drainage basin in Canada, 1949-50**, by J. F. J. Thomas. 1953. 80p. 5 figs., 6 tables, 2 maps (not numbered).
\$1 *Cat. No. M32-838*

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—*Continued—Suite.*

- 839.—**Industrial water resources of Canada.** Water survey report series.
 No. 5.—**Skeena river drainage basin, Vancouver Island, and coastal areas of British Columbia, 1949-51**, by J. F. J. Thomas. 1953. 53p. 4 figs., 5 tables, 1 map (not numbered).
 \$1 *Cat. No. M32-839*
- 840.—**L'industrie minière du Canada en 1950.** 1953. 181p. Tableaux.
 See report No. 835 for English edition.
 35c. *N° de cat. M32-840F*
- 841.—**The Canadian mineral industry in 1951.** 1953. 170p. Tables.
 Voir le rapport n° 843 pour l'édition française.
 75c. *Cat. No. M32-841*
- 842.—**Industrial water resources of Canada.** Water survey report series.
 No. 6.—**Fraser river drainage basin, 1950-51**, by J. F. J. Thomas. 1954. 91p. 4 figs., 5 tables, 2 maps (not numbered).
 \$1 *Cat. No. M32-842*
- 843.—**L'industrie minière du Canada en 1951.** 1954. 203p. Tableaux.
 See report No. 841 for English edition.
 75c. *N° de cat. M32-843F*
- 844.—**The Canadian mineral industry in 1952.** 1954. 198p. Tables.
 Voir le rapport n° 845 pour l'édition française.
 \$1.30 *Cat. No. M32-844*
- 845.—**L'industrie minière du Canada en 1952.** 1955. 210p. Tableaux.
 See report No. 844 for English edition.
 \$1.30 *N° de cat. M32-845F*
- 846.—**The granite industry of Canada**, by F. G. Carr. 1955. 191p. 18 colored plates, 42 figs., tables, 7 maps.
 Voir le rapport n° 852 pour l'édition française.
 \$4.50 *Cat. No. M32-846*
- 847.—**Cobalt in Canada**, by R. J. Jones. 1954. 96p. 31 figs., 19 tables.
 \$2 *Cat. No. M32-847*
- 848.—**The spectrum of steel; a table for the selection of homologous spectral lines**, by John Convey and J. K. Hurwitz. 1954. 55p.
 \$1.30 *Cat. No. M32-848*
- 849.—**Industrial water resources of Canada.** Water survey report series.
 No. 7.—**Saskatchewan river drainage basin, 1951-52**, by J. F. J. Thomas. 1956. 154p. 6 figs., 5 tables, 2 maps.
 \$1 *Cat. No. M32-849*
- 850.—**Analysis directory of Canadian coals**, second edition (1953); **Supplement No. 1** (1955), by E. Swartzman and T. E. Tibbets. 1956. 81p. Tables.
 See also report No. 836.
 \$1 *Cat. No. M32-850*

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 851.—**The Canadian mineral industry, 1953.** 1955. 232p. Tables.
Voir le rapport n° 853 pour l'édition française.
\$1.30 Cat. No. M32-851
- 852.—**L'industrie du granit au Canada** par G. E. Carr. 1957. 200p.
Ill., tableaux, cartes.
See report No. 846 for English edition.
\$4.50 N° de cat. M32-852F
- 853.—**L'industrie minière du Canada en 1953.** 1956. 277p. Tableaux.
See report No. 851 for English edition.
\$1.30 N° de cat. M32-853F
- 854.—**Digest of the mining laws of Canada**, 5th edition, by H. A. Graves and G. R. L. Potter. 1957. 148p.
It is most important to bear in mind that this publication is a digest only, and is intended merely as a general guide to the mining laws and regulations in effect at the time the text was prepared. In case of doubt or difficulty, reference should be made to the text of the various acts and regulations, as amended from time to time.
\$1.30 Cat. No. M32-854
- 855.—**Industrial minerals of Newfoundland**, by G. F. Carr. 1958.
158p. Illus., tables, maps.
\$2.50 Cat. No. M32-855
- 856.—**Industrial water resources of Canada.** Water survey report series. 29cm.
No. 8.—**Mackenzie river and Yukon river drainage basins in Canada, 1952-53**, by J. F. J. Thomas. 1957. 78p. Tables, graphs, maps (1 folded in pocket).
\$1.30 Cat. No. M32-856
- 857.—**Canadian mineral industry, 1954.** 1956. 254p. Tables.
This volume contains reviews on the metals and minerals produced in Canada in 1954. Production statistics for 1954 are preliminary, those for 1953 being final.
\$1.30 Cat. No. M32-857
- 858.—**Industrial water resources of Canada.** Water survey report series. 29cm.
No. 9.—**Churchill River and Mississippi River drainage basins in Canada, 1952-54**, by J. F. J. Thomas. 1958. 53p. Tables, graphs, maps (1 folded in pocket).
75c. Cat. No. M32-858
- 859.—**L'industrie minière du Canada en 1954.** 1957. 337p. Tableaux.
See report No. 857 for English edition.
\$1.30 N° de cat. M32-859F
- 860.—**Minerals, Canada and the world.** 1957. Maps, charts, graphs. 23cm.
This publication is a graphic presentation of the Canadian mineral industry in relation to the world mineral industry. It deals with 35 metals, non-metals and mineral fuels, and employs nearly 120 coloured world maps, Canada maps, bar charts, and line graphs to illustrate mineral production and trade.
Out of print. Cat. No. M32-860

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 860S.—**Statistical supplement to Minerals, Canada and the world.** 114p. Tables. 23cm. Processed.

This booklet contains in tabular form the basic statistical data from which the maps, graphs and charts of "Minerals—Canada and the world" were prepared.

75c.

Cat. No. M32-860S

- 861.—**Industrial water resources of Canada.** Water survey report series. 29cm.

No. 10.—**Nelson river drainage basin in Canada, 1953-56**, by J. F. J. Thomas. 1959. 147p. Tables, graphs, maps (1 folded in pocket).

\$1.30

Cat. No. M32-861

- 862.—**Canadian mineral industry, final edition 1955.** 1959. 278p.

This volume contains reviews of the metals and minerals produced in Canada on a commercial scale during 1955, as well as a few others, which, while not produced in Canada, are nevertheless important to industry.

\$1.30

Cat. No. M32-862

- 863.—**Industrie minière du Canada en 1955.** 1959. 387p. Tableaux.

Le présent volume se compose d'exposés sommaires sur les métaux et les minéraux que le Canada a produits sur un pied commercial en 1955, ainsi que sur certains autres qui ne sont pas de production canadienne, mais qui n'en ont pas moins leur importance dans l'industrie. A moins d'indication contraire, les données statistiques sont définitives.

\$1.30

N^o de cat. M32-863F

- 864.—**Industrial water resources of Canada.** Water survey report series. 29cm.

No. 11.—**Atlantic Provinces, and Saint John River drainage basins in Canada, 1954-56**, by J. F. J. Thomas. 1960. 158p. Tables, graphs, maps (1 folded in pocket).

\$1.65

Cat. No. M32-864

- 865.—**Industrial water resources of Canada.** Water survey report series. 29cm.

No. 12.—**Water quality at some Canadian military establishments, 1956-57**, by J. F. J. Thomas. 1959. 125p. Tables.

\$1.65

Cat. No. M32-865

Note: No. 865 ends the Report Series. Further publications of this nature are called Monographs and commence with No. 866.

Appendix — Appendice

BULLETINS

Bulletin Series, also issued and listed within the "Report and Map Series" of the Mines Branch. Nos. 1-33. 1909-1921.

Bulletins, série de rapports publiés entre 1909 et 1921 dans la série générale de la Direction des mines. Les Bulletins traduits en français sont indiqués dans le tableau qui suit.

NOTE

The following table is a cross-reference to the numbers used for the Report and Map Series where the complete bibliographical information is given.

Le tableau suivant donne la référence au numéro où on trouvera la description détaillée de la publication dans la série de rapport de la Direction des mines.

Bulletin No.—N°	Report No. Rapport n°	Title — Titre
1	30	Investigation of the peat bogs . . . 1908-09.
2	67	Iron ore deposits of the Bristol Mine.
2F	314	Gisements de minerais de fer de la mine Bristol.
3	68	Recent advances in the construction of electric furnaces.
3F	263	Progrès récents dans la construction des fours électriques.
4	71	Investigation of the peat bogs . . . 1909-10.
5	82	Magnetic concentration experiments.
6	111	Diamond drilling at Point Mamainse.
7	110	Western portion of Torbrook iron ore deposits.
8	151	Investigation of the peat bogs . . . 1910-11.
8F	180	Recherches sur les tourbières . . . 1910-11.
9	266	Investigation of the peat bogs . . . 1911-12.
9F	267	Recherches sur les tourbières . . . 1911-1912.
10	336	Notes on clay deposits near McMurray.
11	351	Investigation of the peat bogs . . . 1913-14.
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Bulletin Series—Bulletins—*Continued—Suite.*

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MEMORANDUM SERIES

Mines Branch Memorandum Series. No. 1-137, 1921-1958.

Note.—The following reports and articles have been issued in mimeograph or processed form. Few of those are preliminary reports of investigations made by the Mines Branch which were printed in their final form in the Reports Series. In each case the reference to the Reports Series is given. The Memorandum Series was commenced in 1921 to make reports of general interest available to the public. Since 1952 it has been restricted mainly to surveys of mineral resources.

Mémoires de la Direction des mines. N° 1-137, 1921-1958.

Note.—Quelques mémoires de la Direction des mines ont été publiés en français. Dans la liste complète qui suit, les mémoires en anglais ou en français figurent sous leur numéro de série respectif et la référence à l'édition correspondante dans l'autre langue est donnée dans chaque cas.

- 1.—**Alkali deposits of Western Canada**, by L. H. Cole. January, 1921. 5p. Tables.
See Reports Nos. 586 and 588.
Out of print. Cat. No. M33-1
- 2.—**Oil shales of Manitoba and Saskatchewan** (preliminary statement), by S. C. Ells. November, 1921. 1p.
See Reports Nos. 586 and 588.
35c. Cat. No. M33-2
- 3.—**Cretaceous shales of Manitoba and Saskatchewan**, their economic value as a possible source of crude petroleum, by S. C. Ells. December, 1921. 10p. 2 maps.
See Reports Nos. 586 and 588.
Out of print. Cat. No. M33-3
- 4.—**A new source of soapstone in Ontario** (preliminary statement), by H. S. Spence. April, 1922. 4p.
See Reports Nos. 605 and 607.
Out of print. Cat. No. M33-4
- 5.—**Pottery clays in Canada**, by J. Keele. May, 1922. 8p. (with an amending sheet, dated April 21, 1934.)
Out of print. Cat. No. M33-5
- 6.—**Investigation of a British market for Canadian non-metallic minerals**, by Hugh S. Spence. December, 1922. 8p.
Out of print. Cat. No. M33-6
- 7.—**Directory of Belgian buyers of metals and minerals.** 1922. 2p.
Out of print. Cat. No. M33-7
- 8.—**Directory of British buyers of metals and minerals.** 1922. 10p.
Out of print. Cat. No. M33-8

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Memorandum Series—Mémoires.—*Continued—Suite.*

- 9.—Investigation of the economic value of a fossil resin from British Columbia, by R. T. Elworthy and R. K. Carnochan. November, 1922. 7p. (Prepared for the Annual Western Meeting of the Canadian Institute of Mining and Metallurgy.)
See Reports Nos. 605 and 607.
Out of print. *Cat. No. M33-9*
- 10.—Recovery of petroleum by shafts and galleries at Pechelbronn, Alsace, France, and at Wietze, Hanover, Germany, by Charles Camsell and Arthur Buisson. June, 1924. 11p.
35c. *Cat. No. M33-10*
- 11.—Selective flotation as applied to Canadian ores, by C. S. Parsons. March, 1924. 9p. Tables.
See memorandum No. 29 (revised edition).
Out of print. *Cat. No. M33-11*
- 12.—Notes on the work and organization of the Mines Branch, by John McLeish. November, 1922. 10p.
Out of print. *Cat. No. M33-12*
- 13.—Deschenes refinery of the British Nickel Corporation. February, 1922. 3p. 1pl.
Out of print. *Cat. No. M33-13*
- 14.—List of graphite consumers in Canada. 2p.
Out of print. *Cat. No. M33-14*
- 15.—The selective flotation of the lower grade nickeliferous pyrrhotite ores of Ontario, by W. B. Timm. April, 1924. 11p. Tables.
Prepared in the Division of Ore Dressing and Metallurgy.
See Report No. 617.
Out of print. *Cat. No. M33-15*
- 16.—Experimental tests on the beneficiation of Canadian iron ores, by W. B. Timm. April, 1924. 12p. Tables.
Prepared in the Division of Ore Dressing and Metallurgy.
See Report No. 617.
Out of print. *Cat. No. M33-16*
- 17.—The Lake George antimony ores and their concentration, by C. S. Parsons. September, 1924. 6p. Tables.
See Report No. 643.
35c. *Cat. No. M33-17*
- 18.—Gasoline survey for 1924, preliminary report, by P. V. Rosewarne and J. McD. Chantler. January, 1925. 8p. Chart.
See Report No. 644.
Out of print. *Cat. No. M33-18*
- 19.—Methods of sampling coal deliveries: Mines Branch instructions, by R. E. Gilmore and R. A. Strong. February, 1925. 6p. Illus.
Prepared in the Fuel Testing Division.
35c. *Cat. No. M33-19*

MINES BRANCH PUBLICATIONS

Memorandum Series—Mémoires.—*Continued—Suite.*

- 20.—**The goldfields of Northwestern Quebec**, by W. B. Timm and A. H. A. Robinson. February, 1925. 8p.
Prepared in the Division of Ore Dressing and Metallurgy and Division of Mineral Resources.
See Report No. 642.
Out of print. *Cat. No. M33-20*
- 21.—**Concentration of lead-zinc ores of Eastern Canada**, by C. S. Parsons. March, 1925. 8p. Tables.
Prepared in the Division of Ore Dressing and Metallurgy.
35c. *Cat. No. M33-21*
- 22.—**Concentration of Canadian molybdenite ores**, by W. B. Timm and C. S. Parsons. July, 1925. 11p. 1 figure, tables.
Prepared in the Division of Ore Dressing and Metallurgy.
Out of print. *Cat. No. M33-22*
- 23.—**Gasoline survey for 1925**, by P. V. Rosewarne and H. McD. Chantler. September, 1925. 10p. Tables, graph.
Out of print. *Cat. No. M33-23*
- 24.—**Selected list of books for the brick yard office**, by Howells Fréchette. January, 1926. 4p.
Prepared in the Division of Ceramics and Road Materials.
Out of print. *Cat. No. M33-24*
- 25.—**The concentration of flake graphite ores**, by C. S. Parsons. February, 1926. 11p. Tables, figures.
Prepared in the Division of Ore Dressing and Metallurgy.
35c. *Cat. No. M33-25*
- 26.—**Ceramic Testing and Research Laboratories, Ottawa**, by Howells Fréchette. February, 1926. 7p.
Prepared in the Division of Ceramics and Road Materials.
Out of print. *Cat. No. M33-26*
- 27.—**Gravel and gravel roads**, by R. H. Picher. May, 1926. 7p.
Prepared in the Division of Ceramics and Road Materials.
Voir le mémoire 27A pour l'édition française.
35c. *Cat. No. M33-27*
- 27A.—**Graviers et routes gravelées**, par R. H. Picher. Mai 1926. 8p.
Préparé par la Section de céramique et de matériaux de voirie.
See Memorandum No. 27 for English edition.
35c. *N^o de cat. M33-27F*
- 28.—**Gasoline survey for 1926**, by P. V. Rosewarne and A. F. Gill. November, 1926. 10p. Tables, graph.
Prepared in the Division of Fuels and Fuel Testing.
35c. *Cat. No. M33-28*
- 29.—**Selective flotation as applied to Canadian ores**, by C. S. Parsons. Revised edition. March, 1927. 15p.
Prepared in the Division of Ore Dressing and Metallurgy.
See also Memorandum No. 11.
Out of print. *Cat. No. M33-29*

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Memorandum Series—Mémoires.—Continued—Suite.

- 30.—Analysis of samples of coke sold in Canada, by R. E. Gilmore, and others. May, 1927. 3p. Table.
Prepared in the Division of Fuels and Fuel Testing.
35c. *Cat. No. M33-30*
- 31.—Gasoline survey for 1927, by P. V. Rosewarne and R. J. Offord. April, 1928. 10p. Tables, graph.
Prepared in the Division of Fuels and Fuel Testing.
35c. *Cat. No. M33-31*
- 32.—The Ore Testing and Research Laboratories, Mines Branch, Ottawa, by W. B. Timm. April, 1928. 8p.
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35c. *Cat. No. M33-32*
- 33.—Preliminary report on an investigation of the treatment of certain western clays to overcome drying defects, by Howells Fréchette and J. G. Phillips. April, 1928. 9p.
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35c. *Cat. No. M33-33*
- 34.—New Fuel Research Laboratories, by B. F. Haanel. October, 1928. 8p.
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35c. *Cat. No. M33-34*
- 35.—Gasoline survey for 1928, by P. V. Rosewarne and R. J. Offord. December, 1928. 11p. Tables, graph.
Prepared in the Division of Fuels and Fuel Testing.
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- 36.—Some coal research problems in Canada, by R. E. Gilmore. February, 1929. 10p.
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- 37.—Coke as a fuel for domestic purposes, by C. E. Baltzer. March, 1929. 7p.
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35c. *Cat. No. M33-38*
- 39.—A story of gasoline, by P. V. Rosewarne. May, 1929. 8p.
Prepared in the Division of Fuels and Fuel Testing.
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- 40.—Notes on beryllium and beryl, by H. S. Spence. April, 1930. 16p.
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Out of print. *Cat. No. M33-40*

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Memorandum Series—Mémoires.—*Continued—Suite.*

- 41.—**The clays of Canada**, by Howells Fréchette. September, 1930. 3p.
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Out of print. *Cat. No. M33-41*
- 42.—**Motor fuel survey of Alberta for 1930**, by P. V. Rosewarne and H. McD. Chantler. October, 1930. 13p. 8 tables.
Prepared in the Division of Fuels and Fuel Testing.
Out of print. *Cat. No. M33-42*
- 43.—**Summary report of analyses of natural gas from Turner Valley field in Alberta**, by P. V. Rosewarne. December, 1930. 5p. Table.
Prepared in the Division of Fuels and Fuel Testing.
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- 44.—**Ceramic Testing and Research Laboratories, Ottawa**, by Howells Fréchette. February, 1931. 7p.
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- 45.—**Gasoline survey for 1930**, by H. McD. Chantler. January, 1931. 22p. 2 figs., tables.
Prepared in the Division of Fuels and Fuel Testing.
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- 46.—**Impressions of the mineral industry of British South Africa**, by W. B. Timm. March, 1931. 27p.
Prepared in the Division of Ore Dressing and Metallurgy.
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- 47.—**Advances made in recent years in the metallurgy of gold including improved processes and equipment**, by C. S. Parsons. March, 1931. 8p.
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- 48.—**Radium-bearing minerals from Great Bear Lake, N.W.T.**, by Hugh S. Spence. March, 1931. 4p.
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- 49.—**The lubrication of the gasoline engine**, by P. V. Rosewarne. February, 1931. 16p.
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- 51.—**Occurrences of pitchblende and silver ore at Great Bear Lake, N.W.T.**, by Hugh S. Spence. October, 1931. 6p.
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- 52.—**Status of hydrogenation of petroleum, bitumen, coal tar and coal**, by T. E. Warren. January, 1932. 8p.
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- 53.—**A world survey of recent oil shale developments**, by A. A. Swinerton. January, 1932. 9p. Table.
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- 54.—**The semi-direct production of nickel steel from Sudbury ore**, by T. W. Hardy and H. H. Bleakney. March, 1932. 16p. Tables.
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- 55.—**A classification of coals for use in the by-product coking industry**, by E. J. Burrough and E. Swartzman, reviewed by R. E. Gilmore. March, 1932. 7p. 2 figs., 1 table.
Prepared in the Division of Fuels and Fuel Testing.
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- 56.—**Summary of test on British Columbia coals when used as pulverized fuel**, by E. S. Malloch, and, **Notes on pulverized fuel fired steam generators Vs. other types**, by B. F. Haanel. August, 1932. 15p.
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- 57.—**Refractory clays in Canada**, by J. F. McMahon. September, 1932. 26p.
Prepared in the Division of Ceramics and Road Materials.
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- 58.—**The Mineragraphic Laboratory, Mines Branch**, by W. B. Timm and M. H. Haycock. February, 1933. 10p.
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- 59.—**Zinc dust consumption at Canadian gold mines**, by A. Buisson. April, 1933. 6p. Tables.
Prepared in the Division of Mineral Resources.
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- 60.—**Gasoline survey for 1932**, by H. McD. Chantler. July, 1933. 29p. Tables.
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- 61.—**Zinc dust consumption at Canadian gold mines (1931-1932-1933)**, by A. Buisson. May, 1934. 6p. Tables.
Prepared in the Division of Mineral Resources.
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- 62.—**Characteristics of rock wool experimentally prepared from rock available in the St. Davids-Thorold district, Ontario**, by M. F. Goudge. August, 1934. 9p.
Prepared in the Division of Mineral Resources.
Out of print. *Cat. No. M33-62*

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Memorandum Series—Mémoires.—*Continued—Suite.*

- 63.—Analyses of samples of natural gas from Ontario in 1932 and 1933, by P. V. Rosewarne and R. J. Offord. July, 1934. 4p. Tables. Prepared in the Division of Fuels and Fuel Testing.
35c. *Cat. No. M33-63*
- 64.—Industrial waters of Canada, Interim report No. 1, by Harald A. Leverin. April, 1936. 32p. Tables. Prepared in the Division of Industrial Minerals.
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- 65.—Analyses of some fuel oil sold in Canada, by P. V. Rosewarne and H. McD. Chantler. December, 1936. 5p. Tables.
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- 66.—Industrial waters of Canada, interim report No. 2, by Harald A. Leverin. May, 1937. 30p. Tables. Diagrams. Prepared in the Division of Industrial Minerals.
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- 67.—What Canada is doing in steel, by Alfred W. G. Wilson. August, 1937. 11p. Prepared in the Division of Metallic Minerals.
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- 68.—Industrial waters of Canada, interim report No. 3, by Harald A. Leverin. July, 1938. 52p. Tables. Prepared in the Division of Industrial Minerals.
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- 69.—The concentration of Canadian molybdenite ores, by W. B. Timm and C. S. Parsons. January, 1939. 13p. Tables. Prepared in the Division of Metallic Minerals.
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- 70.—Grindability indices of typical Canadian and other coals, and the relation of grindability to friability, by R. E. Gilmore and J. H. H. Nicolls. May, 1939. 25p. Tables. Prepared in the Division of Fuels.
Out of print. *Cat. No. M33-70*
- 71.—Fusion point of coal ash (F.P.A.) determinations, by R. E. Gilmore and R. J. Young. May, 1939. 13p. Tables, Plates. Prepared in the Division of Fuels.
Out of print. *Cat. No. M33-71*
- 72.—Industrial waters of Canada, interim report No. 4, by Harald A. Leverin. September, 1939. 37p. Tables. Prepared in the Division of Industrial Minerals.
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- 73.—Summary of tests made on three domestic-type wood-burning hot water boilers, by C. E. Baltzer and E. S. Malloch. December, 1939. 12p. Illus., tables. Prepared in the Division of Fuels.
Out of print. *Cat. No. M33-73*

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Memorandum Series—Mémoires.—*Continued—Suite.*

- 74.—Physical and chemical survey of coals from Canadian collieries: Inverness county coalfield, Nova Scotia, by R. A. Strong and others. December, 1939. 68p. Illus., tables, graphs, map. Prepared in the Division of Fuels. Out of print. *Cat. No. M33-74*
- 75.—Preliminary report on brucite deposits in Ontario and Quebec, and their commercial possibilities, by M. F. Goudge. December, 1939. 57p. 2 pls., 3 figs. Prepared in the Division of Industrial Minerals. Out of print. *Cat. No. M33-75*
- 76.—Peat moss deposits in New Brunswick, by H. A. Leverin. January, 1940. 10p. Out of print. *Cat. No. M33-76*
- 77.—Industrial waters in Canada, interim report No. 5, by Harald A. Leverin. June, 1940. 30p. Tables. Prepared in the Division of Industrial Minerals. 75c. *Cat. No. M33-77*
- 78.—Physical and chemical survey of coals from Canadian collieries: Number 2, Cumberland county coalfield, Nova Scotia, by R. A. Strong and others. June, 1940. 110p. 4 pls., 28 figs., tables. Prepared in the Division of Fuels. Out of print. *Cat. No. M33-78*
- 79.—Physical and chemical survey of coals from Canadian collieries: Number 3, Pictou county coalfield, Nova Scotia, by R. A. Strong and others. April, 1941. 125p. 15 figs., tables. Prepared in the Division of Fuels. Out of print. *Cat. No. M33-79*
- 80.—Peat moss deposits in eastern Canada. A survey of areas offering industrial possibilities, by H. A. Leverin. March, 1941. 81p. Prepared in the Division of Industrial Minerals. Out of print. *Cat. No. M33-80*
- 81.—Peat moss deposits in eastern Canada, investigations in 1941, by H. A. Leverin. June, 1942. 37p. Prepared in the Division of Industrial Minerals. 75c. *Cat. No. M33-81*
- 82.—Peat moss deposits in western Canada, preliminary report, investigations in 1942, by H. A. Leverin. October, 1942. 8p. Prepared in the Division of Industrial Minerals. Out of print. *Cat. No. M33-82*
- 83.—Peat moss deposits in Canada, investigations in 1942, by H. A. Leverin. February, 1943. 43p. Prepared in the Division of Industrial Minerals. Voir le mémoire n° 84 pour l'édition française. Out of print. *Cat. No. M33-83*

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Memorandum Series—Mémoires.—*Continued—Suite.*

- 84.—**Dépôts de tourbe de mousse dans la province de Québec**, par H. A. Leverin. Juin 1943. 38p. Tableaux.

Préparé dans la Section des minéraux industriels.

See Memorandum No. 83 for English edition.

75c.

Nº de cat. M33-84F

- 85.—**Industrial waters of Canada**, interim report No. 6, by H. A. Leverin. January, 1944. 40p. Tables.

Prepared in the Division of Industrial Minerals.

Out of print.

Cat. No. M33-85

- 86.—**Peat moss deposits in western Canada**, investigations in 1943, by H. A. Leverin. January, 1944. 16p.

Prepared in the Division of Industrial Minerals.

35c.

Cat. No. M33-86

- 87.—**A rapid laboratory and field method for the determination of bitumen content of bituminous sands**, by W. J. Dyck. January, 1944. 9p. Figs. Table.

35c.

Cat. No. M33-87

- 88.—**Properties of asphalt made from Athabaska bituminous sands**, by A. A. Swinnerton. October, 1944. 17p. Illus., tables, graphs.

Out of print.

Cat. No. M33-88

- 89.—**Physical and chemical survey of coals from Canadian collieries: Number 4, Minto coalfield, New Brunswick**, by E. Swartzman and others. December, 1944. 202p. 2 pls., 43 figs.

Prepared in the Division of Fuels.

Out of print.

Cat. No. M33-89

- 90.—**The peat moss industry in Canada**, by A. A. Swinnerton. February, 1946. 12p. Maps.

Prepared in the Division of Industrial Minerals.

35c.

Cat. No. M33-90

- 90.—**L'industrie de la tourbe de mousse au Canada**, par A. A. Swinnerton. Février 1946. 14p. 2 cartes.

Préparé dans la Section des minéraux industriels.

35c.

Nº de cat. M33-90F

- 91.—**Clays and shales of Prince Edward Island**, by A. R. MacPherson. October, 1947. 17p. Map.

Prepared in the Division of Mineral Resources.

35c.

Cat. No. M33-91

- 92.—**Report on the beneficiation of Drumheller sub-bituminous coals by briquetting using various kinds of binders**, by E. Swartzman. July, 1947. 49p. 4 pls., 4 figs., tables.

Prepared in the Division of Fuels.

Out of print.

Cat. No. M33-92

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Memorandum Series—Mémoires.—*Continued—Suite.*

- 93.—**Gasoline surveys for seven summers between 1939 and 1946**, by P. V. Rosewarne, H. McD. Chantler and P. B. Seely. July, 1947. 35p. Tables, graphs.
Prepared in the Division of Fuels.
75c. *Cat. No. M33-93*

- 94.—**Gasoline surveys for five winters 1941-1942 through 1945-1946**, by P. V. Rosewarne, H. McD. Chantler and P. B. Seely. July, 1947. 27p. Tables, graphs.
Prepared in the Division of Fuels.
75c. *Cat. No. M33-94*

- 95.—**The sampling and examination of clay and shale deposits**, by A. T. Prince. October, 1947. Rev. ed. November 1, 1952. 8p.
Prepared in the Division of Mineral Dressing and Process Metallurgy.
35c. *Cat. No. M33-95*

- 96.—**Determination of uranium in ores by field analysis**, by F. E. Senftle, C. McMahon, and G. G. Eichholz. 1949. Rev. ed. 1955. 27p. Illus., tables.
Prepared in the Division of Radioactivity.
75c. *Cat. No. M33-96*

- 97.—**Physical and chemical survey of coals from Canadian collieries: Part 5, Drumheller coalfield, Alberta**, by E. Swartzman and J. H. H. Nicolls. December, 1947. 167p. Tables, graphs, map.
Prepared in the Division of Fuels.
75c. *Cat. No. M33-97*

- 98.—**Gasoline survey for summer, 1947**, by H. McD. Chantler, P. B. Seely and F. E. Goodspeed. March, 1948. 10p. Tables, graphs.
Prepared in the Division of Fuels.
35c. *Cat. No. M33-98*

- 99.—**Notes on lead occurrences in Canada**, by W. R. McClelland. October, 1948. 27p.
Prepared in the Division of Mineral Resources.
75c. *Cat. No. M33-99*

- 100.—**Analysis directory of Canadian coals**, by E. Swartzman. April, 1948. 209p. Tables.
Prepared in the Division of Fuels.
See also Report No. 836, No. 850 and Monograph No. 868.
75c. *Cat. No. M33-100*

- 101.—**Road building rocks and gravels in Prince Edward Island**, by R. H. Picher. November, 1948. 21p. Map.
Prepared in the Division of Mineral Resources.
35c. *Cat. No. M33-101*

- 102.—**Gasoline survey for summer, 1948**, by P. B. Seely and F. E. Goodspeed. December, 1948. 10p. Tables, graphs.
Prepared in the Division of Fuels.
35c. *Cat. No. M33-102*

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Memorandum Series—Mémoires.—*Continued—Suite.*

- 103.—**Determination of uranium in ores**, modified mercury cathode-cupferron method, by F. T. Rabbitts. August, 1949. 14p. Illus.
Prepared in the Division of Radioactivity.
35c. *Cat. No. M33-103*
- 104.—**Silica in Canada**, by A. R. MacPherson. 1949, reprint 1956.
17p. Tables.
Prepared in the Division of Mineral Resources.
See Memorandum No. 134.
Out of print. *Cat. No. M33-104*
- 105.—**Determination of U_3O_8 in ores and solutions, cellulose column method**, by F. T. Rabbitts, and others. September, 1949. 15p. Illus., graph.
Prepared in the Division of Radioactivity.
35c. *Cat. No. M33-105*
- 106.—**Use of a high-pressure ionization chamber in assaying uncrushed ore samples**, by J. L. Horwood and C. McMahon. January, 1950. 16p. Illus., tables.
Prepared in the Division of Radioactivity.
35c. *Cat. No. M33-106*
- 107.—**Peat moss industry in Canada**, by A. A. Swinnerton. April, 1950. 14p. Illus., maps.
Prepared in the Division of Fuels.
Out of print. *Cat. No. M33-107*
- 108.—**Notes on antimony deposits and occurrences in Canada**, by W. R. McClelland. 1950, reprint 1955. 11p.
Prepared in the Division of Mineral Resources.
Out of print. *Cat. No. M33-108*
- 109.—**Determination of uranium in ores; review of chemical methods**, F. T. Rabbitts, 1950. 13p. Figures.
Prepared in the Division of Radioactivity.
35c. *Cat. No. M33-109*
- 110.—**The chemical determination of thorium in its ores**, by John C. Ingles. February, 1951. 26p. Tables, graph.
Prepared in the Division of Radioactivity.
35c. *Cat. No. M33-110*
- 111.—**Recent investigations into the beneficiation of Canadian gypsum**, by A. R. MacPherson. November, 1950. 28p. Tables.
Prepared in the Division of Industrial Minerals.
75c. *Cat. No. M33-111*
- 112.—**Gasoline survey for summer, 1950**, by H. McD. Chantler, P. B. Seely and R. G. Draper. February, 1951. 12p. Tables, graphs.
Prepared in the Division of Fuels.
35c. *Cat. No. M33-112*
- 113.—**Survey of the copper resources of Canada**, by W. R. McClelland. April, 1951. 88p. Tables, graphs, maps.
Prepared in the Division of Mineral Resources.
75c. *Cat. No. M33-113*

PUBLICATIONS DE LA DIRECTION DES MINES

Memorandum Series—Mémoires.—*Continued—Suite.*

- 114.—**The determination of uranium in ores, fluorophotometric method**, by J. B. Zimmerman. 1951. 31p. Illus., tables, graphs.
Prepared in the Division of Radioactivity.
75c. *Cat. No. M33-114*
- 115.—**Radioassay of uranium ore with the Geiger type equilibrium counter**, by R. D. Wilmot and C. McMahon. 1951. 58p. Illus., tables, graph.
Prepared in the Division of Radioactivity.
75c. *Cat. No. M33-115*
- 116.—**Utilization of low grade domestic chromite**, by K. W. Downes and D. W. Morgan. 1951. Reprinted, 1958. 42p. Tables, graphs. Processed.
Prepared in the Mineral Dressing and Process Metallurgy Division, Mines Branch.
75c. *Cat. No. M33-116*
- 117.—**Preliminary report on coated lightweight concrete aggregate from Canadian clays and shales: Part I, Alberta**, by J. G. Matthews. February, 1952. 69p. Figures, map.
Prepared in the Division of Industrial Minerals.
75c. *Cat. No. M33-117*
- 118.—**Sulphur and pyrites in Canada**, by T. H. Janes. April, 1952. 103p. Tables.
Prepared in the Division of Industrial Minerals.
75c. *Cat. No. M33-118*
- 119.—**Methods of analysis of iron and steel used at the Mines Branch Laboratories**, by J. S. McCree. 1953. 42p. Illus., tables.
Prepared in the Division of Mineral Dressing and Process Metallurgy.
75c. *Cat. No. M33-119*
- 120.—**Preliminary report on coated lightweight concrete aggregate from Canadian clays and shales: Part II, Saskatchewan and Manitoba**, by J. G. Matthews. April, 1952. 51p. Figures, map.
Prepared in the Division of Industrial Minerals.
75c. *Cat. No. M33-120*
- 121.—**Preliminary report on coated lightweight concrete aggregate from Canadian clays and shales: Part III, Ontario**, by J. G. Matthews. June, 1952. 48p. Figures, maps.
Prepared in the Division of Industrial Minerals.
75c. *Cat. No. M33-121*
- 122.—**Preliminary report on coated lightweight concrete aggregate from Canadian clays and shales: Part IV, New Brunswick, Nova Scotia, and Prince Edward Island**, by J. G. Matthews. August, 1952. 47p. Figures, map.
Prepared in the Division of Industrial Minerals.
75c. *Cat. No. M33-122*

MINES BRANCH PUBLICATIONS

Memorandum Series—Mémoires.—*Continued—Suite.*

- 123.—**Electronic concentration of radioactive ores with the Lapointe Picker Belt**, by C. M. Lapointe and R. D. Wilmot. 1952. 40p. Illus., tables.
Prepared in the Division of Radioactivity.
75c. *Cat. No. M33-123*
- 124.—**Gasoline survey for summer, 1952**, by H. McD. Chantler, P. B. Seely and R. G. Draper. October, 1952. 12p. Tables, graphs.
Prepared in the Division of Fuels.
35c. *Cat. No. M33-124*
- 125.—**Tin in Canada: Occurrences and uses**, by W. R. McClelland. 1952. 18p. Tables, map.
Prepared in the Division of Mineral Resources.
35c. *Cat. No. M33-125*
- 126.—**Preliminary report on coated lightweight concrete aggregate from Canadian clays and shales: Part V, Quebec**, by H. S. Wilson. August, 1953. 36p. Figures, map.
Prepared in the Division of Industrial Minerals.
75c. *Cat. No. M33-126*
- 126F.—**Rapport préliminaire traitant d'un agrégat enrobé et léger a béton, fait d'argiles et de schistes canadiens: Partie V, Québec**, par H. S. Wilson. 1954. 40p. 4 figures, 1 carte.
Préparé par le Service des minéraux industriels.
75c. *Nº de cat. M33-126F*
- 127.—**Preparation and burning of peat as a domestic fuel**, by H. P. Hudson and T. R. Skerry. 1954. 19p. Illus., table, graphs.
Prepared in the Division of Fuels.
35c. *Cat. No. M33-127*
- 128.—**Preliminary report on coated lightweight concrete aggregate from Canadian clays and shales: Part VI, British Columbia**, by H. S. Wilson. October, 1954. 42p. Figures, map.
Prepared in the Division of Industrial Minerals.
75c. *Cat. No. M33-128*
- 129.—**Durability of aggregates in concrete mixes (final report)**, by R. H. Picher. 1954. 66p. Tables.
Prepared in the Division of Industrial Minerals.
75c. *Cat. No. M33-129*
- 130.—**Nickel in Canada, with a survey of world conditions**, by W. R. McClelland. 1955. 53p. Figures, tables, maps.
Prepared in the Division of Mineral Resources.
75c. *Cat. No. M33-130*
- 131.—**Gasoline survey for summer, 1955**, by P. B. Seely, A. Yates and R. G. Draper. 1956. 15p. Tables, graphs.
Prepared in the Division of Fuels.
35c. *Cat. No. M33-131*

PUBLICATIONS DE LA DIRECTION DES MINES

Memorandum Series—Mémoires.—*Continued—Suite.*

- 132.—**Interim report on hardness of major Canadian water supplies**, by J. F. J. Thomas. 1956. 18p. Tables.
Prepared in the Division of Industrial Minerals.
35c. *Cat. No. M33-132*
- 133.—**Power and population: Canada's present electricity requirements and the long-term outlook**, by C. E. Baltzer and John Convey. 1956. 25p. Illus., maps.
Prepared in the Division of Fuels.
Voir le mémoire n^o 133F pour l'édition française.
15c. *Cat. No. M33-133*
- 133.—**Energie et population; besoins présents du Canada en matière d'électricité, perspectives d'avenir**, par C. E. Baltzer et John Convey. Ottawa, 1957. 29p. Ill., cartes. Polycopié.
Préparé par le Service des combustibles.
See Memorandum No. 133 for English edition.
15c. *N^o de cat. M33-133F*
- 134.—**Canadian Silica Industry**, by R. K. Collings. Ottawa, 1956. 22p. Tables. Processed.
Prepared in the Division of Industrial Minerals.
35c. *Cat. No. M33-134*
- 135.—**Columbium (niobium) and tantalum**, by R. J. Jones. Ottawa, 1957. 56p. Illus., tables, maps.
Prepared in the Mineral Resources Division.
75c. *Cat. No. M33-135*
- 136.—**Fifty years of fuel testing and research**, by A. A. Swinnerton. Ottawa, 1957. 15p. Illus. Processed.
Prepared in the Fuels Division.
35c. *Cat. No. M33-136*
- 137.—**Zinc in Canada with comments on world conditions**, by R. E. Neelands and D. B. Fraser. Ottawa, 1958. 87p. Figs., tables, maps.
Prepared in Mineral Resources Division.
75c. *Cat. No. M33-137*

Note.—No. 137 ends the Memorandum Series. Further publications of this nature are issued by the Mineral Resources Division as Mineral Surveys.

TECHNICAL PAPERS

Mines Branch Technical Papers. No. 1-17, 1953-1957.

This series was begun in 1953 and is restricted to reports on the methods and results of research carried out in Mines Branch laboratories. Prior to 1953, many of such reports were published in the Memorandum Series. They are reproduced by offset processes.

- 1.—**The determination of thorium in ores by the column method**, by R. G. Guest. 1953. 24p. Figs., tables.
Prepared in the Radioactivity Division.
35c. Cat. No. M34-1
- 2.—**The constitution of bone china; Part I: High temperature phase equilibrium studies in the system tricalcium phosphate-alumina-silica**, by P. D. S. St. Pierre. 1953. 107p. Illus., tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
75c. Cat. No. M34-2
- 3.—**The colorimetric determination of copper with 2,2-diquinolyl in minerals and ores**, by R. J. Guest. 1953. 81p. Tables, graphs.
Prepared in the Radioactivity Division.
35c. Cat. No. M34-3
- 4.—**The determination of aluminum by the fluorophotometric method**, by J. B. Zimmerman. 1953. 12p. Table, graphs.
Prepared in the Radioactivity Division.
35c. Cat. No. M34-4
- 5.—**Effect of germanium on the transformation of white to grey tin at comparatively low temperature**, by R. R. Rogers and J. F. Fydel. 1953. 11p. Illus., tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. Cat. No. M34-5
- 6.—**The determination of uranium in concentrates by the fluorophotometric method**, by J. B. Zimmerman, F. T. Rabbitts, and E. D. Kornelsen. 1953. 9p. Illus., tables.
Prepared in the Radioactivity Division.
35c. Cat. No. M34-6
- 7.—**The constitution of bone china; Part II: Reactions in bone china bodies**, by P. D. S. St. Pierre. 1954. 20p. Figs., tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. Cat. No. M34-7
- 8.—**The determination of uranium in uranium concentrates using ethyl acetate**, by R. J. Guest and J. B. Zimmerman. 1954. 19p. Tables, graphs.
Prepared in the Radioactivity Division.
35c. Cat. No. M34-8

PUBLICATIONS DE LA DIRECTION DES MINES

Technical Papers.—*Continued.*

- 9.—**Electrode potentials and the dissolution of gold**, by G. Thomas. 1954. 14p. Figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. *Cat. No. M34-9*
- 10.—**Electronic concentration of low grade ores with the Lapointe Picker**, by A. H. Bettens and C. M. Lapointe. 1955. 13p. Illus., tables.
Prepared in the Radioactivity Division.
35c. *Cat. No. M34-10*
- 11.—**Refining antimony by electrode position and by distillation**, by R. R. Rogers and R. A. Campbell. 1955. 14p. Illus., tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. *Cat. No. M34-11*
- 12.—**The constitution of bone china; Part III: High temperature phase equilibrium studies in the system tricalcium phosphate-anorthite-silica**, by P. D. S. St. Pierre. 1955. 19p. Figs., tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. *Cat. No. M34-12*
- 13.—**Development of the Port Radium leaching process for recovery of uranium**. 1955. Reprint 1956. 22p. Tables, charts. 25cm. Processed.
Prepared in the Radioactivity Division.
35c. *Cat. No. M34-13*
- 14.—**Measurement of thorium in ores by the thorium emanation method**, by J. B. Zimmerman and J. A. F. Bouvier. 1955. 21p. Illus., tables, graphs.
Prepared in the Radioactivity Division.
35c. *Cat. No. M34-14*
- 15.—**Studies on the precipitation of sodium polyuranates from solutions of sodium uranyl tricarbonate**, by H. J. Herbst. 1956. 29p. Tables, charts.
Prepared in the Radioactivity Division.
35c. *Cat. No. M34-15*
- 16.—**Master sieves at the Mines Branch for standardization of the sieves of the mining industry**, by J. Brannen and L. E. Djingheuzian. 1956. 36p. Tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. *Cat. No. M34-16*
- 17.—**Cyclone atomizer for briquet binder**, by J. Visman. 1957. 14p. Illus., tables, charts. 25cm.
Prepared in the Division of Fuels.
35c. *Cat. No. M34-17*

Note.—No. 17 ends the Technical Paper Series. Further publications of this nature are issued by the Mines Branch as Research Reports.

MINES BRANCH PUBLICATIONS

LIST OF OPERATORS OF MINES, MILLS AND METALLURGICAL WORKS

List No.	Title	Price	Cat. No.
1-1	Metallurgical works in Canada		
	Part I: Primary iron and steel. Annual	.25	M36-1011
	Part II: Non-ferrous and precious metals. Annual.....	.25	M36-1012
1-2	Milling plants in Canada		
	Part I: Metallic ores. Annual.....	.25	M36-1021
	Part II: Industrial minerals. Annual....	.25	M36-1022
2-1	Metal and industrial mineral mines in Canada. Annual.....	.25	M36-2010
	NOTE: <i>Supersedes the following lists:</i>		
2-1	Gold Mines in Canada, 1948.....	<i>o.p.</i>	M36-2011
2-2	Cobalt-silver mines in Canada, 1954.....	<i>o.p.</i>	M36-2020
2-3	Copper, copper-nickel, copper-zinc mines in Canada, 1948.....	<i>o.p.</i>	M36-2030
2-4	Silver-lead-zinc mines in Canada, 1948.....	<i>o.p.</i>	M36-2040
2-5	Iron mines in Canada, 1943.....	<i>o.p.</i>	M36-2050
2-6	Molybdenum, antimony, tungsten mines in Canada, 1948.....	<i>o.p.</i>	M36-2060
2-7	Molybdenum deposits, 1943.....	<i>o.p.</i>	M36-2070
3-1	Abrasives in Canada, 1929.....	<i>o.p.</i>	M36-3010
3-2	Asbestos mines in Canada, 1930.....	<i>o.p.</i>	M36-3020
3-3	Feldspar mines in Canada, 1939.....	<i>o.p.</i>	M36-3030
3-4	Graphite mines in Canada, 1929.....	<i>o.p.</i>	M36-3040
3-5	Gypsum mines in Canada, 1950.....	<i>o.p.</i>	M36-3050
3-6	Magnesium sulphate (epsomite), sodium carbonate, and sodium sulphate (Glauber's salt) operators in Canada, 1929.....	<i>o.p.</i>	M36-3060
3-7	Operators of mica properties, 1942.....	<i>o.p.</i>	M36-3070
3-8	Producers of mineral pigments in Canada, 1929	<i>o.p.</i>	M36-3080
3-9	Quartz (silica) mines in Canada, 1930.....	<i>o.p.</i>	M36-3090
3-10	Salt wells and mines in Canada, 1930.....	<i>o.p.</i>	M36-3100
3-11	Talc and soapstone mines in Canada, 1930.....	<i>o.p.</i>	M36-3110
3-12	Miscellaneous non-metals, 1928.....	<i>o.p.</i>	M36-3120
3-13	Fluorspar mines in Canada, 1943.....	<i>o.p.</i>	M36-3130

PUBLICATIONS DE LA DIRECTION DES MINES

Lists of Operators—*Continued.*

List No.	Title	Price	Cat. No.
4-1	Coal mines in Canada. Annual.....	.25	M36-4010
4-2	Producers of coke in Canada. 1940.....	.25	M36-4020
4-3	Peat producers in Canada. 1948.....	.25	M36-4030
5-1	Petroleum and natural gas, 1930. Discontinued.....	o.p.	M36-5010
5-2	Petroleum refineries in Canada. Annual	.25	M36-5020
6-1	Cement mills in Canada. 1950.....	.25	M36-6010
6-2	Sand-lime brick plants in Canada, 1929. Discontinued.....	o.p.	M36-6020
6-3	Manufacturers of clay products in Canada. 1950.....	.25	M36-6030
6-4	Lime kilns in Canada. 1949.....	.25	M36-6040
6-5	Sand and gravel pits, 1929. Discontinued.....	o.p.	M36-6050
6-6	Stone quarry operators in Canada. 1948.	.25	M36-6060
7-1	Exploration companies in Canada. 1948	.25	M36-7010

MINES BRANCH PUBLICATIONS

INFORMATION CIRCULARS

Information Circulars. No. MR1.-MR26, 1954-1957.

Prepared by the Mineral Resources Division.

MR1.—Survey of developments in the titanium industry during 1953,
by W. Keith Buck. Ottawa, February, 1954.

Out of print.

Cat. No. M38-2/1

MR2.—Survey of the iron ore industry in Canada during 1953, by
W. Keith Buck. Ottawa, March, 1954.

Out of print.

Cat. No. M38-2/2

MR3.—Survey of the natural gas industry in Canada during 1953, by
R. B. Toombs. Ottawa, March, 1954.

Out of print.

Cat. No. M38-2/3

MR4.—Survey of the petroleum industry in Canada during 1953, by
R. B. Toombs. Ottawa, April, 1954.

Out of print.

Cat. No. M38-2/4

MR5.—Canadian iron ore industry and its relationship to the St.
Lawrence Seaway, by W. Keith Buck. Ottawa, April, 1954.

Out of print.

Cat. No. M38-2/5

MR6.—Not published.

MR7.—Zirconium, by R. J. Jones. Ottawa, July, 1954.

Out of print.

Cat. No. M38-2/7

MR8.—Columbium and tantalum in Canada, by R. J. Jones. Ottawa,
September, 1954.

Out of print.

Cat. No. M38-2/8

MR9.—Cerium, by W. J. Beard. Ottawa, February, 1955.

Out of print.

Cat. No. M38-2/9

MR10.—Beryllium in Canada, by W. J. Beard. Ottawa, April, 1955.

Out of print.

Cat. No. M38-2/10

MR11.—Indium, by R. E. Neelands. Ottawa, April, 1955.

Out of print.

Cat. No. M38-2/11

MR12.—Germanium, by W. J. Beard. Ottawa, April, 1955.

Out of print.

Cat. No. M38-2/12

MR13.—Survey of the iron ore industry in Canada during 1954, by
W. Keith Buck. Ottawa, April, 1955. 38p. Figs.

Free.

Cat. No. M38-2/13

MR14.—Survey of developments in the titanium industry during 1954,
by W. Keith Buck. Ottawa, April, 1955. 26p. Tables.

Out of print.

Cat. No. M38-2/14

MR15.—Survey of the petroleum industry in Canada during 1954, by
R. B. Toombs. Ottawa, May, 1955. 31p. Tables, charts.

Out of print.

Cat. No. M38-2/15

PUBLICATIONS DE LA DIRECTION DES MINES
Information Circulars.—*Continued.*

- MR16.—Survey of the natural gas industry in Canada during 1954, by R. B. Toombs. Ottawa, June, 1955.
Out of print. *Cat. No. M38-2/16*
- MR17.—Survey of the iron ore industry in Canada during 1955, by W. Keith Buck. Ottawa, March, 1956. 48p. Figs.
Out of print. *Cat. No. M38-2/17*
- MR18.—Survey of developments in the titanium industry during 1955, by W. Keith Buck. Ottawa, April, 1956. 24p. Tables.
Out of print. *Cat. No. M38-2/18*
- MR19.—Survey of the petroleum industry in Canada during 1955, by R. B. Toombs. Ottawa, June, 1956.
Out of print. *Cat. No. M38-2/19*
- MR20.—Survey of the natural gas industry in Canada during 1955, by R. B. Toombs. Ottawa, June, 1956. 33p. Tables.
Out of print. *Cat. No. M38-2/20*
- MR21.—Rare or less common metals in Canada, by T. H. Janes. Ottawa, October, 1956. 16p.
Free. *Cat. No. M38-2/21*
- MR22.—Survey of the iron ore industry in Canada during 1956, by T. H. Janes. Ottawa, May, 1957. 83p. Figs.
Free. *Cat. No. M38-2/22*
- MR23.—Survey of the petroleum industry in Canada during 1956, by R. B. Toombs and R. A. Simpson. Ottawa, June, 1957. 80p. Tables.
Out of print. *Cat. No. M38-2/23*
- MR24.—Survey of the natural gas industry in Canada during 1956, by R. B. Toombs and R. A. Simpson. Ottawa, May, 1957. 49p. Tables, charts.
Out of print. *Cat. No. M38-2/24*
- MR25.—Survey of the gold mining industry in Canada during 1956, by T. W. Verity. Ottawa, May, 1957. 55p. Map.
Free. *Cat. No. M38-2/25*
- MR26.—Survey of developments in the titanium industry during 1956, by T. H. Janes. Ottawa, August, 1957. 40p. Tables.
Free. *Cat. No. M38-2/26*

Note.—This series is continued under the name of Mineral Information Bulletins by the Mineral Resources Division.

MINES BRANCH PUBLICATIONS

INFORMATION CIRCULARS

Information Circulars. No. IM1-3, 1955-1956.

Prepared by the Industrial Minerals Division.

IM1.—Lithium, by V. A. Haw. Ottawa, June, 1955. 10p. Tables.
Free. *Cat. No. M38-4/1*

IM2.—Sampling and examination of clay and shale deposits, by J. G. Phillips. Ottawa, December, 1955.
Out of print. *Cat. No. M38-4/2*

IM3.—Clays and shales of Eastern Canada, by J. G. Phillips. Ottawa, October, 1956. 13p.
Free. *Cat. No. M38-4/3*

Note.—IM3 ends the Industrial Minerals Division Information Circular series. Further publications of this nature are issued by the Mines Branch, under a new series, commencing with IC102.

ACTS AND REGULATIONS

Administered by the Department of
Mines and Technical Surveys

	<i>Cat. No.</i>	<i>Price</i>
Canada Lands Surveys:		
Act, R.S.C., 1952, c. 26. 26p.	YX54-26	.35
—amended, S.C., 1956, c. 22. 1p.....	YX3-223/c.22	.25
Examination Regulations, P.C. 1955-1956		
SOR/61-259 (July 12, 1961) 6p.....	•	
Tariff of Fees, SOR/54-102 (April 14, 1954),		
1p.....	•	
Department of Mines and Technical Surveys:		
Act, R.S.C., 1952, c. 73, 4p.....	YX54-73	.25
Emergency Gold Mining Assistance:		
Act, R.S.C., 1952, c. 95. 10p.	YX54-95	.25
—amended, R.S.C., 1952, c. 318, 2p.....	YX54-318	.25
—amended, S.C., 1952-53, c. 32, 2p.....	YX3-217/c.32	.25
—amended, S.C., 1953-54, c. 26, 1p.....	YX3-221/c.26	.25
—amended, S.C., 1955, c. 19. 2p.....	YX3-222/c.19	.25
—amended, S.C., 1956, c. 20. 1p.....	YX3-223/c.20	.25
—amended, S.C., 1958, c. 28. 1p.....	YX3-241/c.28	.25
—amended, S.C., 1960, c. 28, 1p.....	YX3-243/c.28	.35
Act and regulations. Office consolidation.		
1956. 39p.....	YX1-4056	.35
Regulations, P.C. 1960, SOR/60-401 (Sep-		
tember 14, 1960). 26p.....	SP2-560/401	.35
Explosives:		
Act, R.S.C., 1952, c. 102. 11p.....	YX54-102	.25
—amended, S.C., 1953-54, c. 14. 4p.....	YX3-221/c.14	.25
Regulations, P.C. 1956-349, SOR/56-88. 68p.		
—amended, P.C. 1956-1552, SOR/56-396. 1p.	SP2-556/88	.80
—amended, P.C. 1957-335, SOR/57-84:	SP2-556/396	.25
Ammonium nitrate and fuel oil order. 1p.	SP2-557/84	.25

*Note.—Contained in the regular issue of the *Canada Gazette*, Part II, cited in each case. Price for single copies, 50c.

MINES BRANCH PUBLICATIONS

LOIS ET RÈGLEMENTS

Appliqués par le ministère des Mines et des Relevés techniques

	<i>N de cat.</i>	<i>Prix</i>
Arpentage des terres du Canada:		
Loi, S.R.C., 1952, c. 26. 27p.....	YX54-26F	.35
—modifiée, S.C., 1956, c. 22. 1p.....	YX3-223/c.22F	.25
Règlements:		
Examens sur l'arpentage, C.P. 1955-1556, DORS/61-259 (12 juillet 1961). 6p.....	•	
Tarif des droits, DORS/54-102 (14 avril 1954). 1p.....	•	
Exploitation des mines d'or (aide):		
Loi, S.R.C., 1952, c. 95. 10p.....	YX54-95F	.25
—modifiée, S.R.C., 1952, c. 318. 2p.....	YX54-318F	.25
—modifiée, S.C., 1952-53, c. 32. 2p.....	YX3-217/c.32F	.25
—modifiée, S.C., 1953-54, c. 26. 1p.....	YX3-221/c.26F	.25
—modifiée, S.C., 1955, c. 19, 2p.....	YX3-222/c.19F	.25
—modifiée, S.C., 1956, c. 20. 1p.....	YX3-223/c.20F	.25
—modifiée, S.C., 1958, c. 28. 1p.....	YX3-241/c.28	.25
—modifiée, S.C. 1960, c. 28. 1p.....	YX3-243/c.28	.35
Règlements, C.P. 1960-1162, DORS/60-401 (14 septembre 1961). 27p.....	<i>SP2-560/401F</i>	<i>.35</i>
Explosifs:		
Loi, S.R.C., 1952, c. 102. 11p.....	YX54-102F	.25
—modifiée, S.C., 1953-54, c. 14. 4p.....	YX3-221/c.14F	.25
Règlements, C.P. 1956-349, DORS/56-88. 73p.....	<i>SP2-556/88F</i>	<i>.80</i>
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—Modifiés, C.P. 1957-335, DORS/57-84. 1p.	<i>SP2-557/84F</i>	<i>.25</i>
Ministère des Mines et des Relevés techniques:		
Loi, S.R.C., 1952, c. 73. 4p.....	YX54-73F	.25

*Note.—Voir la livraison régulière de la Gazette du Canada, partie 2, à la date citée. Prix: 50c. l'exemplaire.

PUBLICATIONS DE LA DIRECTION DES MINES

ANNUAL REPORTS

Reports of the Department of Mines for the fiscal years ending March 31, during the period 1921 to 1936. Included are statements from the Geological Survey, the National Museum of Canada (formerly Victoria Memorial Museum), the Mines Branch, the Explosives Division, the Editorial Division and the Accounting Division.

Note.—The Department of Mines from 1907 to 1920 did not prepare an annual report distinct from the annual summary reports issued by the Geological Survey of Canada and the Mines Branch. These annual summary reports of the Mines Branch are listed under the series of reports, see pages 21 to 86.

Year	Pages	Pub. No.	Price	Cat. No.	Year	Pages	Pub. No.	Price	Cat. No.
1921	47p.	1903	.15	M1-21	1929	58p.	2217	.35	M1-29
1922	48p.	1968	.15	M1-22	1930	61p.	2269	o.p.	M1-30
1923	58p.	2005	.15	M1-23	1931	61p.	2297	.35	M1-31
1924	71p.	2047	.20	M1-24	1932	50p.	2315	.35	M1-32
1925	75p.	2076	.20	M1-25	1933	43p.	2338	.35	M1-33
1926	77p.	2116	.30	M1-26	1934	44p.	2360	.35	M1-34
1927	59p.	2142	.25	M1-27	1935	48p.	2402	.35	M1-35
1928	65p.	2182	.25	M1-28	1936	54p.	2423	.35	M1-36

Reports of the Department of Mines and Resources for the fiscal years ended March 31, during the period 1937 to 1949. Included are statements from the Mines and Geology Branch, the Lands, Parks and Forests Branch, the Surveys and Engineering Branch, the Indian Affairs Branch, the Immigration Branch, and reports of Soldier Settlement of Canada for 1937 to 1944.

Year	Pages	Price	Cat. No.	Year	Pages	Price	Cat. No.
1937	333p.	o.p.	M1-37	1944	231p.	o.p.	M1-44
1938	330p.	o.p.	M1-38	1945	220p.	o.p.	M1-45
1939	351p.	o.p.	M1-39	1946	258p.	o.p.	M1-46
1940	258p.	o.p.	M1-40	1947	270p.	o.p.	M1-47
1941	244p.	o.p.	M1-41	1948	270p.	.75	M1-48
1942	192p.	o.p.	M1-42	1949	256p.	.75	M1-49
1943	207p.	o.p.	M1-43				

Reports of the Department of Mines and Technical Surveys for the fiscal years ended March 31, for the period beginning in 1950. Included are statements from the Explosives Division, the Surveys and Mapping Branch, the Geological Survey of Canada, the Mines Branch, the Dominion Observatories, and the Geographical Branch.

Year	Pages	Price	Cat. No.	Year	Pages	Price	Cat. No.
1950	112p.	.75	M1-50	1954	107p.	.75	M1-54
1951	98p.	.75	M1-51	1955	118p.	.75	M1-55
1952	108p.	.75	M1-52	1956	113p.	.75	M1-56
1953	98p.	.75	M1-53	1957	131p.	o.p.	M1-57

MINES BRANCH PUBLICATIONS

Annual Reports—*Continued.*

Reports of the Department of Mines and Technical Surveys for the calendar years for the period beginning in 1957. Included are statements from the Administration Branch (Explosives Division and Mineral Resources Division), the Surveys and Mapping Branch, the Geological Survey of Canada, the Mines Branch, the Dominion Observatories and the Geographical Branch.

Year	Pages	Price	Cat. No.	Year	Pages	Price	Cat. No.
1957	142p.	o.p.	M1-457	1961	75p.	\$1.30	M1-4/1961
1958	143p.	\$1.30	M1-458	1962	82p.	\$1.50	M1-4/1962
1959	159p.	\$1.30	M1-4/1959	1963	58p.	\$1.50	M1-4/1963
1960	61p.	\$1.30	M1-4/1960	1964	54p.	\$1.50	M1-4/1964

Summary of activities of the Department of Mines and Technical Surveys for the calendar years for the period beginning in 1950.

Year	Pages	Price	Cat. No.	Year	Pages	Price	Cat. No.
1950 (1st)	37p.	o.p.	M2-50	1954 (5th)	42p.	free	M2-54
1951 (2nd)	50p.	o.p.	M2-51	1955 (6th)	51p.	o.p.	M2-55
1952 (3rd)	90p.	o.p.	M2-52	1956 (7th)	63p.	free	M2-56
1953 (4th)	65p.	o.p.	M2-53				

Note.—The publications covering the summary of activities for the calendar year 1956 ends this series. The annual reports should now be consulted for such information.

RAPPORTS ANNUELS

Rapports du ministère des Mines pour l'année financière se terminant le 31 mars, pour la période 1921-1936 comprenant les rapports de la Commission géologique, du Musée national, de la Division des mines, de la Division des explosifs, de la Division des publications et de la Division de la comptabilité.

Note.—Le Ministère des Mines depuis sa création en 1907 jusqu'en 1920 ne prépara pas de rapports annuels distincts des rapports sommaires de ses deux Divisions principales: la Commission géologique et la Division des mines. Les rapports sommaires de la Division des mines font partie de sa série de rapports. (Voir pages 21-86.)

Année	Pages	Pub. n°	Prix	N° de cat.	Année	Pages	Pub. n°	Prix	N° de cat.
1921	49p.	1954	épuisé	M1-21F	1929	62p.	2231	épuisé	M1-29F
1922	50p.	1973	épuisé	M1-22F	1930	65p.	2276	épuisé	M1-30F
1923	62p.	2011	épuisé	M1-23F	1931	39p.	2307	épuisé	M1-31F
1924	75p.	2054	épuisé	M1-24F	1932	31p.	2334	épuisé	M1-32F
1925	79p.	2090	épuisé	M1-25F	1933	27p.	2342	épuisé	M1-33F
1926	83p.	2123	épuisé	M1-26F	1934	30p.	2361	épuisé	M1-34F
1927	63p.	2148	épuisé	M1-27F	1935	41p.	2408	épuisé	M1-35F
1928	67p.	2203	épuisé	M1-28F	1936	44p.	2431	épuisé	M1-36F

Rapports du ministère des Mines et des Ressources pour l'année financière terminée le 31 mars, pour la période 1937-1949 comprenant les rapports de la Division des mines et de la géologie, de la Division des terres, parcs et forêts, de la Division des arpentages et du génie, de la Division des affaires indiennes, de la Division de l'immigration, et le rapport sur l'établissement des soldats au Canada pour les années 1937-1944.

Année	Pages	Prix	N° de cat.	Année	Pages	Prix	N° de cat.
1937	352p.	épuisé	M1-37F	1944	259p.	épuisé	M1-44F
1938	346p.	épuisé	M1-38F	1945	234p.	épuisé	M1-45F
1939	372p.	épuisé	M1-39F	1946	280p.	épuisé	M1-46F
1940	268p.	épuisé	M1-40F	1947	292p.	épuisé	M1-47F
1941	260p.	épuisé	M1-41F	1948	316p.	épuisé	M1-48F
1942	200p.	épuisé	M1-42F	1949	284p.	épuisé	M1-49F
1943	224p.	épuisé	M1-43F				

Rapports du ministère des Mines et des Relevés techniques pour l'année financière terminée le 31 mars, pour la période 1950-1957.

Sommaire.—Introduction.—Division des mines.—Commission géologique du Canada.—Division des levés et de la cartographie.—Observatoires fédéraux.—Division de la géographie.—Publications.

Année	Pages	Prix	N° de cat.	Année	Pages	Prix	N° de cat.
1950	127p.	.75	M1-50F	1954	115p.	.75	M1-54F
1951	110p.	épuisé	M1-51F	1955	120p.	.75	M1-55F
1952	129p.	.75	M1-52F	1956	113p.	.75	M1-56F
1953	112p.	.75	M1-53F	1957	136p.	.75	M1-57F

MINES BRANCH PUBLICATIONS

Rapports annuels.—*Suite.*

Rapports du ministère des Mines et des Relevés techniques pour les années civiles à partir de 1957 comprenant les rapports de l'administration (y compris la Division des explosifs et la Division des ressources minérales), de la Direction des levés et de la cartographie, de la Commission géologique du Canada, de la Direction des mines, de la Direction des observatoires fédéraux, ainsi que de la Direction de la géographie.

Année	Pages	Prix	N ^o de cat.	Année	Pages	Prix	N ^o de cat.
1957	147p.	épuisé	M1-457F	1961	81p.	\$1.30	M1-4/1961F
1958	155p.	épuisé	M1-458F	1962	89p.	\$1.50	M1-4/1962F
1959	173p.	\$1.30	M1-4/1959F	1963	63p.	\$1.50	M1-4/1963F
1960	69p.	\$1.30	M1-4/1960F	1964	58p.	\$1.50	M1-4/1964F

Exposé sommaire des travaux du ministère des Mines et des Relevés techniques pour les années civiles à partir de 1950.

Année	Pages	Prix	N ^o de cat.	Année	Pages	Prix	N ^o de cat.
1950 (1 ^{er})	42p.	épuisé	M2-50F	1954 (5 ^e)	52p.	épuisé	M2-54F
1951 (2 ^e)	53p.	épuisé	M2-51F	1955 (6 ^e)	60p.	épuisé	M2-55F
1952 (3 ^e)	73p.	épuisé	M2-52F	1956 (7 ^e)	76p.	épuisé	M2-56F
1953 (4 ^e)	81p.	épuisé	M2-53F				

Note.—La publication de ces exposés sommaires a cessé en 1956. Ces renseignements se trouvent maintenant dans les rapports annuels.

Part III

Mines Branch Publications 1958

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MINES BRANCH PUBLICATIONS

MINES BRANCH PUBLICATIONS

The first five categories listed in Part I have been reduced to four—Monographs, Research Reports, Technical Bulletins and Information Circulars. The following paragraphs are intended to provide some information as to the scope of each.

Monographs: Reports giving a thorough treatment of a particular subject or class of subjects and likely to be valuable as reference texts.

Research Reports: Original contributions to science and technology, based primarily on laboratory research conducted in the Mines Branch laboratories or under Mines Branch auspices. This class does not include literature surveys. Reprints of research papers published in journals are included in this group.

Technical Bulletins: Reports in this category describe investigations at the Mines Branch on specific materials by applications of established or lesser-known procedures, where the work is considered to be of wide interest to the industry or the technical public.

Information Circulars: Contributions of general interest to industry and the public at large. This category may include literature and statistical surveys of a periodic nature, as well as short information bulletins.

The Monograph replaces the Report series which ended with No. 865, the Research Report replaces the Technical Paper series ending with No. 17, the Information Circular replaces the Memorandum series ending with No. 137 and the old Information Circular series ending with No. 26.

MINES BRANCH PUBLICATIONS

MONOGRAPHS—MONOGRAPHIES

Mines Branch Reports or Monographs. No. 866- , 1959- .

Note.—*Series commences with No. 866. Reports giving a thorough treatment of a particular subject or class of subjects and likely to be valuable as reference tests.*

- 866.—**Manual of analytical methods for the uranium concentrating plant**, by J. C. Ingles. 1959. 3 parts. Illus. 26cm. Looseleaf with binder.

Prepared in the Radioactivity Division.

Contents.—*Part 1: General considerations.—Part 2: Methods—Uranium and thorium.—Part 3: Supplementary methods.*

This manual is an attempt to fill the need and to provide, in addition to tested analytical methods, the auxiliary information which is so valuable in operating the laboratory efficiently. The Radioactivity Division is continually improving and simplifying these methods as well as developing new ones, and from time to time, new sheets will be issued to be inserted in alphabetical order in the specified Part.

\$13

Cat. No. M32-866

- 867.—**Experimental coal-burning gas turbine exhaust-heated cycle**, by J. W. Stachiewicz and D. L. Mordell. 1960. 176p. Illus., tables, graphs. Paper bound.

This report describes the initial research and development of a completely new power plant carried out in Canada. It describes only what might be regarded as a first phase. The work was primarily a research effort designed to reveal and elucidate the problems that will be encountered in connection with the design and operation of a prototype power plant, which could be regarded as a second phase.

\$5.25

Cat. No. M32-867

Proceedings, conference on coal-burning gas turbines. 249p.

\$2.50

Cat. No. M32-867/1

- 868.—**Analysis directory of Canadian coals**, second edition (1953); **Supplement No. 2** (1960), by T. E. Tibbetts and W. J. Montgomery. 1962. 56p. Tables, folded maps. 25cm. Paper cover.

Prepared in the Fuels and Mining Practice Division.

The object of this Directory is to provide general information on the characteristics of coals produced in various parts of Canada.

See Memorandum Series No. 100 and Reports Nos. 836 and 850.

\$1

Cat. No. M32-868

- 869.—**Industrial water resources of Canada.** Water survey report series. 29cm.

No. 13.—Lower St. Lawrence River drainage basin in Canada, 1955-60, by J. F. J. Thomas. 1962. 334p. Tables, graphs, maps (1 folded in pocket).

\$2.50.

Cat. No. M32-869

- 870.—**Industrial water resources of Canada.** Water survey report series. 29cm.

No. 14.—Upper Great Lakes drainage basin in Canada, 1957-63, by J. F. J. Thomas and R. M. Gale. 1965. 137p. Tables, figs., maps (1 folded in pocket).

Prepared in the Mineral Processing Division.

\$3.25.

Cat. No. M32-870

PUBLICATIONS DE LA DIRECTION DES MINES

Monographs.—Continued.

872.—**Industrial water resources of Canada.** Water survey report series. 29cm.

No. 12.—**Water quality at some Canadian military establishments, 1959-1962: supplement**, by J. F. J. Thomas. 1963. 52p. Tables.

Prepared in the Mineral Processing Division.

\$1.25.

Cat. No. M32-872

873.—**Bentonite in Canada**, by J. S. Ross. 1964. 61p. Illus., tables, figs.

This report describes in detail many aspects of bentonite in Canada and includes sections on definitions, properties, identification, uses, specifications, history and production, trade, consumption, occurrence, reserves, exploration, mining, milling, laboratory investigation, technology, marketing and outlook.

\$3.75.

Cat. No. M32-873

874.—**Rock mechanics principles**, by D. F. Coates. 1965. Various paging. Tables, figs. 28cm. Paper bound.

Prepared in the Mining Research Laboratories, Fuels and Mining Practice Division.

The purpose of this monograph is to provide some guidance for the young engineer or scientist entering the field of rock mechanics. The emphasis is on the application of engineering mechanics to problems arising from the needs either to prevent or to cause rock failure with particular reference to those problems encountered in mining.

\$5.

Cat. No. M32-874

MINES BRANCH PUBLICATIONS

INFORMATION CIRCULARS
CIRCULAIRES D'INFORMATION

Information Circulars. No. IC102- , 1958- .

Circulaires d'information. N° IC102- , 1958- .

IC102.—**Forgeability of steels: a critical survey of the literature**, by W. A. Morgan and G. P. Contractor. Ottawa, January, 1958. 66p. Illus.

Prepared in the Physical Metallurgy Division.

35c.

Cat. No. M38-3/102

IC103.—**Technical advances in milling and process metallurgy in Canada during 1957**, by L. E. Djigheuzian. Ottawa, March, 1958. 7p. Illus.

Prepared in the Mineral Dressing and Process Metallurgy Division.

(Reprinted from Canadian Mining Journal, February, 1958).

35c.

Cat. No. M38-3/103

IC104.—**Peat moss in Canada**, by A. A. Swinnerton. Ottawa, February, 1958. 31p. Illus., tables.

Prepared in the Fuels Division.

35c.

Cat. No. M38-3/104

IC104.—**Tourbe de mousse au Canada**, par A. A. Swinnerton, Division des combustibles, février 1958. Ottawa, 1961. 33p. Ill., tableaux.

Le présent rapport décrit la formation, les propriétés et les usages de la mousse de tourbière, les méthodes de préparation du produit dans l'industrie de la mousse de tourbière, et comprend également un résumé statistique de la production et du commerce de la tourbe de mousse.

35c.

N° de cat. M38-3/104F

IC105.—**Story of the early days of the extraction of helium gas from natural gas in Canada, 1915-1920**, by John Satterly, University of Toronto. April, 1959. 42p. Illus.

Prepared in the Mines Branch.

35c.

Cat. No. M38-3/105

IC106.—**Review and evaluation of methods of particle size analysis**, by R. F. Pilgrim. November 3, 1958. 83p. Tables.

Prepared in the Mineral Dressing and Process Metallurgy Division.

Contents.—*Part 1: Definition of terms and classification of sizing methods.*—

Part 2: Sieve analysis.

35c.

Cat. No. M38-3/106

IC107.—**Copper in domestic water systems (a review)**, by John Ungar. September 1, 1959. 16p.

Prepared in the Mineral Processing Division.

35c.

Cat. No. M38-3/107

IC108.—**Extensive progress being made in high temperature technology**, by Norman F. H. Bright. Ottawa, October, 1958. 16p.

Prepared in the Mineral Dressing and Process Metallurgy Division.

(Reprinted from the December 25, 1958 issue of the Northern Miner).

15c.

Cat. No. M38-3/108

PUBLICATIONS DE LA DIRECTION DES MINES

Information Circulars.—Continued.

Circulaires d'information.—Suite.

IC109.—**Direct reduction of iron ore**, by R. R. Rogers. Ottawa, October, 1958. 11p.

Prepared in the Mineral Dressing and Process Metallurgy Division.

15c.

Cat. No. M38-3/109

IC110.—Not available.

IC111.—**The corrosion resistance of wrought iron and open-hearth steel. A literature survey**, by I. I. Tingley and R. R. Rogers. Ottawa, December, 1958.

Prepared in the Mineral Dressing and Process Metallurgy Division.

35c.

Cat. No. M38-3/111

IC112.—Not available.

IC113.—**Radiation laboratory of the Mines Branch, 1947-1959**, by G. G. Eichholz. Ottawa, April 1, 1959. 51p. Illus.

Prepared in the Radioactivity Division.

35c.

Cat. No. M38-3/113

IC114.—**Canadian gypsum industry**, by R. K. Collings. Ottawa, October 30, 1959. 41p. Tables, map, chart.

Prepared in the Mineral Processing Division.

This report describes the occurrences, technology and uses of gypsum and briefly outlines the present-day position of gypsum in the Canadian mineral industry.

35c.

Cat. No. M38-3/114

IC115.—**Propagating and non-propagating fatigue cracks in metals**, by R. C. A. Thurston. Ottawa, January 20, 1960. 44p. Graphs.

Prepared in the Physical Metallurgy Division.

35c.

Cat. No. M38-3/115

IC116.—**Physical metallurgy and uses of gold; bibliography for the ten-year period 1950 to 1959**, by L. Badone, Canadian Metal Mining Association and N. S. Spence. Ottawa, January, 1960. 86p.

Prepared in the Physical Metallurgy Division.

35c.

Cat. No. M38-3/116

IC117.—**Directory and bibliography of high temperature condensed states research in Canada and elsewhere, 1959**, by Norman F. H. Bright. Ottawa, March, 1960. 99p. Tables.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/117

IC118.—**Directory and bibliography of high temperature condensed state research in Canada and elsewhere, January to March, 1960**, by Norman F. H. Bright. Ottawa, May 30, 1960. 55p.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/118

IC119.—**Directory and bibliography of high temperature condensed state research in Canada and elsewhere, April to June, 1960**, by Norman F. H. Bright. Ottawa, August 25, 1960. 61p.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/119

MINES BRANCH PUBLICATIONS

Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

- IC120.—**Selection of steels for the avoidance of brittle failure**, by K. Winterton. July, 1960. 44p. Figs.

Prepared in the Physical Metallurgy Division.

35c.

Cat. No. M38-3/120

- IC121.—**Present status of underground storage of natural gas in southern Ontario and Quebec**, by R. P. Charbonnier. Ottawa, May, 1960. 24p. Tables.

Prepared in the Fuels and Mining Practice Division.

35c.

Cat. No. M38-3/121

- IC122.—**Biography of high temperature condensed states research in Canada and elsewhere, July to September, 1960**, by Norman F. H. Bright. Ottawa, November, 1960. 69p.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/122

- IC123.—**Bibliography of high temperature condensed states research in Canada and elsewhere, October to December, 1960**, by Norman F. H. Bright. January, 1961. 74p.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/123

- IC124.—**Brief history of welding technology**, by K. Winterton. Ottawa, March, 1961. 81p. Illus.

Prepared in the Physical Metallurgy Division.

35c.

Cat. No. M38-3/124

- IC125.—**Notes on the safe handling of uranium alloys in industry**, by G. G. Eichholz. Ottawa, January, 1961. 17p. Tables.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/125

- IC126.—**Barium minerals industry in Canada**, by J. S. Ross. Ottawa, September, 1960. 60p. Tables, figs.

Prepared in the Mineral Processing Division.

35c.

Cat. No. M38-3/126

- IC127.—**Fluorspar**, by C. M. Bartley. Ottawa, April, 1961. 55p. Tables.

Prepared in the Mineral Processing Division

This publication provides data on the properties and uses of fluorspar, on the world production and consumption trends, and on Canadian deposits and occurrences.

35c.

Cat. No. M38-3/127

- IC128.—**Bibliography of high temperature condensed states research in Canada and elsewhere, January to March, 1961**, by Norman F. H. Bright. Ottawa, June, 1961. 86p.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/128

PUBLICATIONS DE LA DIRECTION DES MINES

Information Circulars.—Continued.

Circulaires d'information.—Suite.

- IC129.—Physical metallurgy and uses of gold: the properties of gold and alloys containing gold**, by L. Badone of the Canadian Metal Mining Association, and N. S. Spence of the Physical Metallurgy Division. October, 1961. 192p. Tables, graphs.

Prepared in the Physical Metallurgy Division.

\$1.30

Cat. No. M38-3/129

- IC130.—Bibliography of high temperature condensed states research in Canada and elsewhere, April to June, 1961**, by Norman F. H. Bright. Ottawa, July, 1961. 97p.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/130

- IC131.—List of certified electrical apparatus, certified fire-resistant conveyor belting and certified diesel engines for coal mine use**, by G. K. Brown. Certification list No. 1 to June 30, 1961, August, 1961. 16p. Tables.

Prepared in the Fuels and Mining Practice Division.

35c.

Cat. No. M38-3/131

- IC132.—Directory and bibliography of high temperature condensed states research in Canada and elsewhere, July to September, 1961**, by Norman F. H. Bright. November, 1961. 41p.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/132

- IC133.—Analyses of coal and coke during 1960**, by W. J. Montgomery and J. G. Jorgensen. December, 1961. 20p. Tables.

Prepared in the Fuels and Mining Practice Division.

35c.

Cat. No. M38-3/133

- IC134.—Analytical determination of uranium in iron and steel alloys**, by J. C. Ingles, J. B. Zimmerman and J. L. Horwood. December, 1961. 104p. Illus., tables, graphs.

Prepared in the Extraction Metallurgy Division and Mineral Sciences Division.

35c.

Cat. No. M38-3/134

- IC135.—Bibliography of high temperature condensed states research in Canada, October to December, 1961**, by Norman F. H. Bright. February, 1962. 7p.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/135

- IC136.—Bibliography and directory of high temperature condensed states research in Canada and elsewhere, January to March, 1962**, by Norman F. H. Bright. May, 1962. 12p. Tables.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/136

MINES BRANCH PUBLICATIONS

Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

- IC137.—**Development of the Canadian lightweight aggregate industry**, by H. S. Wilson. Reprinted from the 1961 issue of the Journal of the Canadian Ceramic Society (with amendments). June, 1962. 22p. Graphs.

Prepared in the Mineral Processing Division.

35c.

Cat. No. M38-3/137

- IC138.—**Analysis of coal and coke during 1961**, by W. J. Montgomery and G. C. Behnke. July, 1962. 20p. Tables.

Prepared in the Fuels and Mining Practice Division.

75c.

Cat. No. M38-3/138

- IC139.—**Recollections of the development of the Athabasca oil sands**, by S. C. Ells. July, 1962. 114p. Illus., figs.

Prepared in the Fuels and Mining Practice Division.

75c.

Cat. No. M38-3/139

- IC140.—**Bibliography of high temperature condensed states research in Canada, April-June, 1962**, by Norman F. H. Bright. July, 1962. 5p.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/140

- IC141.—**Backfill methods in Canadian mines**, by M. A. Twidale. August, 1962. 21p. Illus., tables, figs.

Prepared in the Fuels and Mining Practice Division.

75c.

Cat. No. M38-3/141

- IC142.—**Bibliography of high temperature condensed states research in Canada, July-September, 1962**, by Norman F. H. Bright. October, 1962. 5p.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-3/142

- IC143.—**Alphabetical index to V. I. Mikheev's "X-ray determination of minerals"**, by E. H. Nickel. December 6, 1962. 25p.

Prepared in the Mineral Sciences Division.

75c.

Cat. No. M38-3/143

- IC144.—**Stockage souterrain du gaz naturel dans le sud de l'Ontario et du Québec**, par R. P. Charbonnier. Janvier 1963. 30p. Tableaux.

Préparé dans la Division des combustibles et du génie minier.

50c.

N° de cat. M38-3/144F

- IC145.—**Cyanide recovery from gold-barren waste solutions: a literature review**, by A. J. Gilmore and W. A. Gow. April, 1963. 10p. Tables, figs.

Prepared in the Extraction Metallurgy Division.

50c.

Cat. No. M38-3/145

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Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

- IC146.—**Bibliography of high temperature condensed states research in Canada, October-December, 1962**, by Norman F. H. Bright, January, 1963. 6p.
Prepared in the Mineral Sciences Division.
50c. *Cat. No. M38-3/146*
- IC147.—**Analyses of coal and coke during 1962**, by W. J. Montgomery and G. C. Behnke. April, 1963. 20p. Tables.
50c. *Cat. No. M38-3/147*
- IC148.—**Bibliography and directory of high temperature condensed states research in Canada and elsewhere**, January-March, 1963, by Norman F. H. Bright. April, 1963. 11p. Tables.
Prepared in the Mineral Sciences Division.
50c. *Cat. No. M38-3/148*
- IC149.—**Mines Branch contributions to the United Nations conference on the application of science and technology for the benefit of the less developed areas**, Geneva, February 4-20, 1963. Ottawa, May, 1963. 47p. Illus., figs.
Prepared by the Mines Branch staff.
75c. *Cat. No. M38-3/149*
- IC150.—**Physics and Radiotracer Subdivision of the Mines Branch, 1959-1963**, by G. G. Eichholz. May, 1963. 48p. Illus. 28cm. Paper cover.
Prepared in the Mineral Sciences Division.
\$1. *Cat. No. M38-3/150*
- IC151.—**Mines Branch scientific and technical papers published by the staff in 1962**. Ottawa, 1963. 50p.
50c. *Cat. No. M38-3/151*
- IC152.—**Iron ore pelletizing**, a literature survey, by G. N. Banks, R. A. Campbell and G. E. Viens. August, 1963. 23p.
Prepared by the Extraction Metallurgy Division.
50c. *Cat. No. M38-3/152*
- IC153.—**Survey of niobium alloys and their strengthening mechanisms**, by D. C. Briggs. July, 1963. 26p. Tables.
Prepared in the Physical Metallurgy Division.
75c. *Cat. No. M38-3/153*
- IC154.—**Bibliography of high temperature condensed states research in Canada, April-September, 1963**, by Norman F. H. Bright. October, 1963. 8p.
Prepared in the Mineral Sciences Division.
50c. *Cat. No. M38-3/154*
- IC155.—**Bibliography of high temperature condensed states research, published in Canada, October-December, 1963**, by Norman F. H. Bright. January, 1964. 34p.
Prepared in the Mineral Sciences Division.
75c. *Cat. No. M38-3/155*

MINES BRANCH PUBLICATIONS

Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

- IC156.—**Report on the Cambridge International Summer School for quantitative methods in reflected-light microscopy**, by E. H. Nickel. December, 1963. 49p.

Prepared in the Mineral Sciences Division.

\$1.

Cat. No. M38-3/156

- IC157.—**Salt and the Canadian salt industry**, by R. K. Collings. April, 1964. 34p. Tables, graphs, maps.

Prepared in the Mineral Processing Division.

75c.

Cat. No. M38-3/157

- IC158.—**Polarographic and amperometric methods applied to metallurgical analysis**, by A. Hitchen. April, 1964. 11p. Tables.

Prepared in the Extraction Metallurgy Division.

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Cat. No. M38-3/158

- IC159.—**Bibliography of high temperature condensed states research published in Canada, January-March, 1964**, by Norman F. H. Bright. April, 1964. 8p.

Prepared in the Mineral Science Division.

50c.

Cat. No. M38-3/159

- IC160.—**Exploitation of a small peat bog**, by T. E. Tibbetts and R. E. Kirkpatrick (Grand Falls Peat Co. Ltd., Grand Falls, N.B.). May, 1964. 48p. Tables, map, figs.

Prepared in the Extraction Metallurgy Division.

\$1.

Cat. No. M38-3/160

- IC161.—**Analyses of coal and coke during 1963**, by W. J. Montgomery and G. C. Behnke. May, 1964. 15p.

Prepared in the Fuels and Mining Practice Division.

50c.

Cat. No. M38-3/161

- IC162.—**Mines Branch: Scientific and technical papers published by the staff in 1963**. June, 1964. 84p.

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Cat. No. M38-3/162

- IC163.—**List of certified electrical apparatus, certified fire-resistant conveyor belting and certified diesel engines for coal mine use**, by G. K. Brown. 2nd edition. (Certification list No. 2—to June 30, 1964. Supersedes IC131). August, 1964. 22p. Tables.

Prepared in the Fuels and Mining Practice Division.

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Cat. No. M38-3/163

- IC164.—**Bibliography of high temperature condensed states research published in Canada, April-June, 1964**, by Norman F. H. Bright. July, 1964. 8p.

Prepared in the Mineral Sciences Division.

50c.

Cat. No. M38-3/164

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Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

- IC165.—**Dissemination of technical information to Canadian industry**, by John Convey and F. T. Rabbitts. February, 1964. 39p.

The purpose of this report is to stimulate growth in Canadian industry by promoting more rapid and more widespread adoption of new technical developments through better means of communication.

75c.

Cat. No. M38-3/165

- IC166.—**Bibliography of high temperature condensed states research published in Canada, October-December, 1964**, by Norman F. H. Bright. January, 1965. 7p.

Prepared in the Mineral Sciences Division.

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Cat. No. M38-3/166

- IC167.—**Bibliography of high temperature condensed states research published in Canada, July-September, 1964**, by Norman F. H. Bright. October, 1964. 7p.

Prepared in the Mineral Sciences Division.

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Cat. No. M38-3/167

- IC168.—**Notch toughness of ultra-high-strength steels in relation to design considerations**, by R. C. A. Thurston, December, 1964. 49p. Tables, figs.

Prepared in the Physical Metallurgy Division.

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- IC169.—**Athabasca tar sands as a source of crude oil**, by D. S. Montgomery. September, 1964. 13p. Tables, figs.

Prepared in the Fuels and Mining Practice Division.

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- IC170.—**Review of the properties of zinc sulphide**, by E. H. Nickel. April, 1965, 38p. Tables.

Prepared in the Mineral Sciences Division.

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Cat. No. M38-3/170

- IC171.—**Mines Branch: Scientific and technical papers published by the staff in 1964**. February, 1965. 52p.

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Cat. No. M38-3/171

- IC172.—**Bibliography of high temperature condensed states research published in Canada, January-March, 1965**, by Norman F. H. Bright. April, 1965. 7p.

Prepared in the Mineral Sciences Division.

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Cat. No. M38-3/172

- IC173.—**Analyses of coal and coke during 1964**, by W. J. Montgomery and G. C. Behnke. July, 1965. 18p. Tables.

Prepared in the Fuels and Mining Practice Division.

50c.

Cat. No. M38-3/173

MINES BRANCH PUBLICATIONS

Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

- IC174.—Occurrence of telluride minerals at the Acupan gold mine, Mountain Province, Philippines, by Louis J. Cabri. Reprinted from *Economic Geology*, v. 60, No. 5, pp. 1080-1082 (1965). September, 1965.

Prepared in the Mineral Sciences Division.
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- IC175.—Bibliography of high temperature condensed states research published in Canada, April-September, 1965, by Norman F. H. Bright. October, 1965. 12p.

Prepared in the Mineral Sciences Division.
50c.

Cat. No. M38-3/175

- IC176.—Preparation of "as-polished" metallographic finishes in non-ferrous metals, by R. I. Hamilton and E. F. Connors. June, 1965. 28p.

Prepared in the Physical Metallurgy Division.
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- IC177.—Bibliography of high temperature condensed states research published in Canada, October-December, 1965, by Norman F. H. Bright. January, 1966. 10p.,

Prepared in the Mineral Sciences Division.
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Cat. No. M38-3/177

- IC178.—Bibliography of high temperature condensed states research published in Canada, January-March, 1966, by Norman F. H. Bright. April, 1966. 8p.

Prepared in the Mineral Sciences Division.
50c.

Cat. No. M38-3/178

- IC179.—Preliminary mineralogical study of the silver deposits in the Cobalt area, Ontario, by W. Petruk. June, 1966. 36p. Tables, figs.

Prepared in the Mineral Sciences Division.
75c.

Cat. No. M38-3/179

- IC180.—Filtration (a literature survey), by N. Nemeth, March, 1966. 15p. Tables.

Prepared in the Mineral Processing Division.
50c.

Cat. No. M38-3/180

- IC181.—Scientific and technical papers published by the staff in 1965. June, 1966. 42p.

50c.

Cat. No. M38-3/181

- IC182.—Analyses of coal and coke during 1965, by W. J. Montgomery and G. C. Behnke. June, 1966. 17p. Tables.

Prepared in the Fuels and Mining Practice Division.
50c.

Cat. No. M38-3/182

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Information Circulars.—Continued.

Circulaires d'information.—Suite.

- IC183.—Directory of high-temperature condensed states research in Canada, July, 1966, by Norman F. H. Bright. July, 1966. 16p.**

Prepared in the Mineral Sciences Division.

50c.

Cat. No. M38-3/183

- IC184.—Bibliography of high temperature condensed states research published in Canada, April-June, 1966, by Norman F. H. Bright. July, 1966. 8p.**

Prepared in the Mineral Sciences Division.

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Cat. No. M38-3/184

- IC185.—Bibliography of high-temperature condensed states research published in Canada, July-September, 1966, by Norman F. H. Bright. October, 1966. 8p.**

Prepared in the Mineral Sciences Division.

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Cat. No. M38-3/185

- IC186.—Copper-zirconium alloys (a literature survey), by J. L. Dion and R. Thomson. November, 1966. 24p. Tables, figs.**

Prepared in the Physical Metallurgy Division.

75c.

Cat. No. M38-3/186

- IC187.—Bibliography of high temperature condensed states research published in Canada, October-December, 1966, by Norman F. H. Bright. January, 1967. 8p.**

Prepared in the Mineral Sciences Division.

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Cat. No. M38-3/187

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Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

MINES BRANCH PUBLICATIONS

RESEARCH REPORTS

Research Reports. No. R1- , 1958- .

Note.—Original contributions to science and technology, based primarily on laboratory research conducted in the Mines Branch laboratories or under Mines Branch auspices. This class does not include literature surveys. Reprints of research papers published in journals are included in this group.

R1.—Some effects of pressure on consumable electrode arc melting, by J. W. Suiter. Ottawa, May, 1958. 9p. Figs.

Prepared in the Physical Metallurgy Division.

35c.

Cat. No. M38-1/1

R2.—Effects of furnace atmospheres on the sintering behaviour of uranium dioxide, by A. H. Webster and N. F. H. Bright. Ottawa, February, 1958. 50p. Illus. Tables.

Prepared in the Mineral Dressing and Process Metallurgy Division.

35c.

Cat. No. M38-1/2

R3.—Leaching of manganese from pyrolusite ore by pyrite, by G. Thomas and B. J. P. Whalley. Ottawa, February, 1958. 7p. Illus.

Prepared in the Mineral Dressing and Process Metallurgy Division.

35c.

Cat. No. M38-1/3

R4.—Compound $\text{CaO} \cdot \text{Ti}_2\text{O}_3$, by N. F. H. Bright, J. F. Rowland and J. G. Wurm. Ottawa, March, 1958. 4p. Tables.

Prepared in the Mineral Dressing and Process Metallurgy Division.

35c.

Cat. No. M38-1/4

R5.—Influence of aluminum, lead and iron on the structure and properties of galvanized coatings, by J. J. Sebisty and J. O. Edwards. Ottawa, March, 1958. 47p. Illus., Tables.

Prepared in the Physical Metallurgy Division.

35c.

Cat. No. M38-1/5

R6.—Study of surface carbides, differential steel attack and pore formation in the galvanizing process, by J. J. Sebisty. Ottawa, March, 1958. 18p. Illus.

Prepared in the Physical Division.

35c.

Cat. No. M38-1/6

R7.—Some new fluoride complexes of trivalent titanium, by N. F. H. Bright and J. G. Wurm. Ottawa, April, 1958. 8p. Tables.

Prepared in the Mineral Dressing and Process Metallurgy Division.

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Cat. No. M38-1/7

R8.—Chemistry of manganese deposits, by W. R. Trost. June 4, 1958. Ottawa, June, 1959. 125p. Tables, figs.

Prepared in the Mineral Dressing and Process Metallurgy Division.

35c.

Cat. No. M38-1/8

R9.—Properties of sand-cast magnesium alloys. Part I: Binary magnesium-zinc alloys, by B. Lagowski and J. W. Meier. June, 1958. Released for general distribution, 1964. 25p. Figs.

Prepared in the Physical Metallurgy Division.

(See R22, R56 and R63 for Part II, III and IV).

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Cat. No. M38-1/9

PUBLICATIONS DE LA DIRECTION DES MINES

Research Reports.—*Continued.*

R10.—Will not be available.

R11.—**Design of heat-treatable titanium alloys**, by A. J. Williams. Ottawa, June, 1958. 26p. Illus., tables.

Prepared in the Physical Metallurgy Division.

35c.

Cat. No. M38-1/11

R12.—Will not be available.

R13.—Will not be available.

R14.—**Voltaic cells in fused salts. Part III. The system: silver-silver chloride, cadmium-cadmium chloride**, by S. N. Flengas and T. R. Ingraham. Ottawa, May, 1958. 6p. Tables, figs.

Prepared in the Mineral Dressing and Process Metallurgy Division.

35c.

Cat. No. M38-1/14

R15.—**Radioactive dial marker for the Decca Navigational Aid**, by G. E. Alexander and G. G. Eichholz. Ottawa, June, 1958. 8p. Figs.

Prepared in the Radioactivity Division.

35c.

Cat. No. M38-1/15

R16.—**Voltaic cells in fused salts. Part I. The silver-silver chloride, cobalt-cobaltous chloride system**, by S. N. Flengas and T. R. Ingraham. Ottawa, 1958. 11p. Figs.

Prepared in the Mineral Dressing and Process Metallurgy Division.

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Cat. No. M38-1/16

R17.—**Voltaic cells in fused salts. Part II. The systems: (a) silver-silver chloride, lead-lead chloride; (b) silver-silver chloride, zinc, zinc chloride; (c) silver-silver chloride, nickel-nickelous chloride**, by S. N. Flengas and T. R. Ingraham. Ottawa, 1958. 6p. Illus. tables.

Prepared in the Mineral Dressing and Process Metallurgy Division.

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Cat. No. M38-1/17

R18.—**Measurement of the residence time of slurries in an aerator tank using radioactive tracers**, by E. C. Gibson and G. G. Eichholz. Ottawa, June, 1958. 10p. Illus.

Prepared in the Radioactivity Division.

35c.

Cat. No. M38-1/18

R19.—**Experimental electric smelting of manganese ores, Part I**, by R. A. Campbell, G. E. Viens and R. R. Rogers. Ottawa, 1958. 7p. Tables.

Prepared in the Mineral Dressing and Process Metallurgy Division.

35c.

Cat. No. M38-1/19

R20.—**Voltaic cells in fused salts. Part IV. Electrode potentials of the systems: Ti/TiCl (KCl-NaCl), Cu/CuCl (KCl-NaCl), Cu/CuCl₂ (KCl-NaCl), Cr/CrCl₂ (KCl-NaCl), and Cr/CrCl₃ (KCl-NaCl). Radox potentials of the systems: Pt/CuCl, CuCl₂ (KCl-NaCl), and Pt/CrCl₂, CrCl₃ (KCl-NaCl)**, by S. N. Flengas and T. R. Ingraham. Ottawa, 1958. 13p. Tables, figs.

Prepared in the Mineral Dressing and Process Metallurgy Division.

(Reprinted from Canadian Journal of Chemistry, vol. 36, 1958, pp. 1103-1115).

35c.

Cat. No. M38-1/20

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Research Reports.—*Continued.*

- R21.—**On the occurrence of E-carbide in iron**, by F. W. C. Boswell. Reprinted from ACTA Crystallographica, vol. 2, part 1, January, 1958. Ottawa, 1958. 4p. Table.
Prepared in the Physical Metallurgy Division.
35c. Cat. No. M38-1/21
- R22.—**Properties of sand-cast magnesium alloys, part 2: Metallography of magnesium-zinc alloys**, by B. Lagowski. August, 1958. (Released for general distribution, 1964.) 14p. Figs.
Prepared in the Physical Metallurgy Division.
See R9, R22 and R63 for Part I, II and IV.
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- R23.—**Effect of shot peening prior to electroplating on the fatigue properties of an alloy steel**, by N. B. Brown. Ottawa, September, 1958. 12p. Illus., tables.
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- R24.—**Gamma-ray analysis of atmospheric dust samples**, by J. L. Horwood. Ottawa, September, 1958. 22p. Table, figs.
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- R25.—**Determination of kerosene entrainment losses in the solvent extraction of a leach liquor**, by C. M. Lapointe. Ottawa, September, 1958. 16p. Figs.
Prepared in the Radioactivity Division.
35c. Cat. No. M38-1/25
- R26.—**Composition and crystallography of niocalite**, by E. H. Nickel, J. F. Rowland and J. A. Maxwell. Ottawa, September, 1958. 9p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
(Reprinted from the Canadian Mineralogist, vol. 6, part II, 1958).
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- R27.—**Composition and microtexture of an ulvöspinel magnetite intergrowth**, by E. H. Nickel. Ottawa, September, 1958. 9p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
(Reprinted from the Canadian Mineralogist, vol. 6, part II, 1958).
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- R28.—**Effect on reagent consumption of recycling solutions in the weak acid leaching of a uranium ore**, by V. M. McNamara and W. A. Gow. Ottawa, November, 1958. 20p. Tables, figs.
Prepared in the Radioactivity Division.
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- R29.—**Voltaic cells in fused salts. Part V. The systems: Sn/SnCl₂ (KCl-NaCl), Fe/FeCl (KCl-NaCl), and Mn/MnCl₂ (KCl-NaCl)**, by S. N. Flengas and T. R. Ingraham. Ottawa, September, 1958. 6p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. Cat. No. M38-1/29

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Research Reports.—*Continued.*

- R30.—**Low pressure hydrogenation of coker distillate from Athabasca bitumen**, by F. L. Booth, R. E. Carson, K. W. Bowles and D. S. Montgomery. Ottawa, September 5, 1958. 92p. Tables, figs.
Prepared in the Fuels Division.
35c. *Cat. No. M38-1/30*
- R31.—**Studies in the separation of the rare earths from thorium in sulfate solutions, using cation exchange resins**, by D. C. Lewis and J. C. Ingles. Ottawa, October, 1958. 40p. Tables, figs.
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35c. *Cat. No. M38-1/31*
- R32.—**Some solubility studies in the system: thorium carbonate-sodium carbonate-sodium bicarbonate-sodium sulphate-water**, by J. C. Ingles and F. J. Kelly. Ottawa, October, 1958. 9p. Tables.
Prepared in the Radioactivity Division.
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- R33.—**Recovery of uranium from an acid leach liquor, using an anion exchange resin and sodium carbonate and bicarbonate as eluting agents**, by E. Kornelsen, V. M. McNamara and J. C. Ingles. Ottawa, June, 1959. 47p. Tables, figs.
Prepared in the Extraction Metallurgy Division.
35c. *Cat. No. M38-1/33*
- R34.—**"Thorin" colorimetric method for thorium determination: effect of some common ions, and methods for overcoming interferences**, by J. A. F. Bouvier and R. J. Guest. Ottawa, November, 1958. 14p. Tables.
Prepared in the Radioactivity Division.
35c. *Cat. No. M38-1/34*
- R35.—**Effects of cold work and quenching on the magnetic susceptibility of a commercial titanium alloy**, by Y. L. Yao. Reprinted from American Society for Metals No. 114; vol. 51, trans. 1958. 9p. Figs.
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- R36.—**Measurement of wall thickness of metal from one side only, by the direct current conduction method**, by J. G. Buchanan, F. W. Marsh and R. C. A. Thurston. Reprinted from Jan.-Feb., 1958 issue of Non-destructive Testing. 5p. Figs.
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- R37.—**Effect of different surface treatments on the fatigue strength of drill steel**, by T. W. Wlodek. Reprinted from the Canadian Mining and Metallurgical Bulletin, February, 1958. 13p. Figs., tables.
Prepared in the Physical Metallurgy Division.
35c. *Cat. No. M38-1/37*

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Research Reports.—*Continued.*

- R38.—Effect of various factors on the mechanical properties of magnesium alloy castings, by J. W. Meier. Reprinted from Congrès International de fonderie, Bruxelles 1958, p. 225-240. Figs., tables. Prepared in the Physical Metallurgy Division.
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- R39.—Pressure distribution within a vacuum arc furnace, by J. W. Suiter. Reprinted from Journal of the Electrochemical Society, vol. 105, January, 1958. 3p. Tables, figs. Prepared in the Physical Metallurgy Division.
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- R40.—Grain boundaries in metals, by F. Weinberg. Figs.
Contents.—A. Grain boundary melting by F. Weinberg and E. Teghtsoonian. Reprinted from *Acta Metallurgica*, vol. 5, No. 8, 1957, p. 455-464.—B. Further observations on grain boundary melting. Reprinted from *Acta Metallurgica*, vol. 6, No. 8, 1958, p. 535-538.—C. Grain boundary shear in aluminum. Reprinted from *Trans. of the Metallurgical Society of AIME*, vol. 212, Dec. 1958. Prepared in the Physical Metallurgy Division.
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- R44.—Grain boundaries in metals, by F. Weinberg. 82p. Illus. Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/44
- R45.—Alum-amine process for the recovery of alumina from shale, by G. Thomas and T. R. Ingraham. Ottawa, April, 1959. 27p. Tables, figs. Prepared in the Mineral Dressing and Process Metallurgy Division.
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- R46.—Graphical determination of uranium and thorium in ores from their gamma-ray spectra, by J. L. Horwood. Ottawa, December, 1959. 24p. Prepared in the Mineral Sciences Division.
35c. Cat. No. M38-1/46

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Research Reports.—*Continued.*

- R47.—**Vacuum degassing of steel, Part I: literature survey and preliminary work**, by D. E. Parsons and W. A. Morgan. Ottawa, May, 1959. 81p. Tables, figs.
Prepared in the Physical Metallurgy Division.
35c. *Cat. No. M38-1/47*
- R48.—**Crystallography of compounds in the calcium oxide-niobium pentoxide system**, by John F. Rowland, Norman F. H. Bright and Arnout Jongejan. Ottawa, June, 1959. 19p. Tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. *Cat. No. M38-1/48*
- R49.—**Embrittlement of solid metals in a liquid metal**, by W. A. Morgan. Ottawa, September, 1959. 7p.
Prepared in the Physical Metallurgy Division.
35c. *Cat. No. M38-1/49*
- R50.—**Solubilities of TiCl_4 in mixtures of KCl-MgCl and the electrode potentials of the titanium chlorides in 1/1 (mole) KCl-NaCl solutions**, by S. N. Flengas. Reprinted from Ann. N.Y. Acad. Sci. 79, Art. 11, January 30, 1960. Pp. 853-872. Tables, graphs.
Prepared in the Extraction Metallurgy Division.
35c. *Cat. No. M38-1/50*
- R51.—**Radiochemical evaluation of fire assay method for determination of silver**, by G. H. Faye and W. R. Inman. Ottawa, June, 1959. 5p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. *Cat. No. M38-1/51*
- R52.—**Electromotive force series of metals in fused salts and activities of metal chlorides in 1:1 molar KCl-NaCl solutions**, by S. N. Flengas and T. R. Ingraham. Ottawa, August, 1959. 8p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. *Cat. No. M38-1/52*
- R53.—**Surface area determination of magnesium powder with chromium-51 tracer solutions**, by H. P. Dibbs. Ottawa, October, 1959. 16p. Tables, figs.
Prepared in the Mineral Sciences Division.
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- R54.—**Effect of casting temperature on aluminium alloy test bar properties**, by J. W. Meier and A. Couture. Ottawa, February, 1959. 44p. Tables, figs.
Prepared in the Physical Metallurgy Division.
35c. *Cat. No. M38-1/54*
- R55.—**Slopes of working curves in emission spectrometric analysis of certain silicates**, by J. K. Hurwitz. Ottawa, December, 1959. 4p. Tables.
Prepared in the Physical Metallurgy Division.
35c. *Cat. No. M38-1/55*

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Research Reports.—Continued.

- R56.—Properties of sand-cast magnesium alloys. Part III: Effect of titanium additions to magnesium-zinc alloys**, by B. Lagowski and J. W. Meier. January, 1960. Released for general distribution, 1964. 28p. Tables, figs.

Prepared in the Physical Metallurgy Division.

See R9, R22 and R63 for Part I, II and IV.

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Cat. No. M38-1/56

- R57.—Occurrence of native nickel-iron in the serpentine rock of the eastern townships of Quebec Province**, by E. H. Nickel. Ottawa, January, 1960. 13p. Tables, figs.

Prepared in the Mineral Sciences Division.

35c.

Cat. No. M38-1/57

- R58.—Exchange reactions between zinc and its ions**, by J. E. Sandor. Ottawa, October, 1959. 27p. Illus., graphs.

Prepared in the Mineral Sciences Division.

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Cat. No. M38-1/58

- R59.—Continuous monitoring of uranium leach solutions**, by G. G. Eichholz. Ottawa, January 21, 1960. 24p. Illus., tables, graphs. Bilingual synopsis.

Prepared in the Mineral Sciences Division.

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Cat. No. M38-1/59

- R60.—Surface area determination of magnesium powders by sorption of C-14—labeled oleic acid**, by C. M. Lapointe. Ottawa, March 7, 1960. 10p. Illus., graph.

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Cat. No. M38-1/60

- R61.—Isolation of the rare earth elements**, by Bernard Zimmerman and John C. Ingles. Reprinted from Analytical Chemistry, February, 1960. Ottawa, March, 1960. 6p. Tables.

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Cat. No. M38-1/61

- R62.—Surface exchange reactions of silver and its ions**, by J. E. Sandor. Ottawa, April 19, 1960. 22p. Table, graphs.

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Cat. No. M38-1/62

- R63.—Properties of sand-cast magnesium alloys, part 4: Mg-Ag, Mg-Ag-Zr and Mg-Ag-Zn-Zr alloys**, by B. Lagowski and J. W. Meier. May, 1960. (Released for general distribution—1964.) 27p. Tables, figs.

Prepared in the Physical Metallurgy Division.

See R9, R22 and R56 for Part I, II and III.

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- R64.—Effect of high temperatures on concretes incorporating different aggregates**, by N. G. Zoldners. Ottawa, May, 1960. 48p. Illus., tables, graphs.

Prepared in the Mineral Processing Division.

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Research Reports.—*Continued.*

- R65.—**Corrosion study in processing uranium ore**, by I. I. Tingley and R. R. Rogers. Ottawa, January, 1960. 6p. Illus., tables.
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- R66.—**Equilibrium decomposition pressure of K_2TiCl_6** , by S. N. Flengas and T. R. Ingraham. Ottawa. February, 1960. 5p. Tables, figs.
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- R67.—**Determination of total rare earths in high grade uranium Products**, by R. J. Guest. Ottawa, August, 1960. 22p. Tables, graph.
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- R68.—**Mechanical and structural changes during the deformation of copper by fatigue**, by J. T. McGrath and R. C. A. Thurston. Ottawa, July, 1960. 20p. Table, figs.
Prepared in the Physical Metallurgy Division.
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- R69.—**Amerometric determination of uranium (IV) in mixtures of uranium oxides**, by A. Hitchen. Ottawa, 1960.
Prepared in the Extraction Metallurgy Division.
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- R70.—**Study of mercury-cathode membrane calls for the electrolytic reduction of uranyl solutions**, by J. W. Kim and R. Simard. Ottawa, September 28, 1960. 32p. Tables, graphs.
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- R71.—**Measurement of dissolved air in alkaline solutions from uranium mills and from gold mills**, by G. Thomas and T. R. Ingraham. Ottawa, June, 1960. 5p. Table, figs.
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- R72.—**Development of an improved steel for the production of propulsion shafting for naval vessels: Part I, An examination of steel currently in use; Part II, Modifications of this steel**, by R. D. McDonald and W. A. Morgan. Ottawa, October, 1960. 27p. Illus., tables.
Prepared in the Physical Metallurgy Division.
35c. *Cat. No. M38-1/72*
- R73.—**Decomposition pressures of ferric sulphate and aluminum sulphate**, by N. A. Warner and T. R. Ingraham. Reprinted from Canadian Journal of Chemistry, v. 38, 1960, pp. 2196-2202. Ottawa, July, 1960. 7p. Tables, figs.
Prepared in the Extraction Metallurgy Division.
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Research Reports.—*Continued.*

- R74.—Development of the alum-amine process for the recovery of alumina from shale**, by G. Thomas and T. R. Ingraham. (Reprinted from the Canadian Journal of Chemical Engineering, December, 1960, pp. 220-222.) Ottawa, December, 1960. 3p. Tables, figs. Prepared in the Extraction Metallurgy Division.
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- R75.—Criteria of ductility in uniaxial tension**, by H. H. Bleakney. January 16, 1961. Ottawa, January, 1961. 32p. Tables, graphs. Prepared in the Physical Metallurgy Division.
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- R76.—System iron-titanium-oxygen at 1200° C and oxygen partial pressures between 1 Atm. and 2×10^{-14} Atm**, by A. H. Webster and Norman F. H. Bright. Reprinted from the Journal of the American Ceramic Society, v. 44, No. 3, pp. 110-116 (1961). Ottawa, April, 1961. 7p. Diagsr. Prepared in the Mineral Sciences Division.
35c. *Cat. No. M38-1/76*
- R77.—Electrode potentials of the uranium chlorides in fused alkali chloride solutions**, by S. N. Flengas. Reprinted from the Canadian Journal of Chemistry, vol. 39 (1961), pp. 773-784. June 27, 1960. Ottawa, 1961. Tables, figs. Prepared in the Extraction Metallurgy Division.
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- R78.—Study of the Athabasca bitumen from the Abasand Quarry, Alberta, Canada. Part I: Early history, analysis of the bituminous sand, and isolation and structural analysis of the asphaltene fraction**, by M. L. Boyd and D. S. Montgomery. November, 1961. 67p. Illus., tables, graphs. Prepared in the Fuels and Mining Practice Division.
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- R84.—Vapour-phase stripping of Lloydminster crude oil in a sloping-plate distillation tower**, by F. L. Booth, R. E. Carson and D. S. Montgomery. July, 1961. 60p. Illus., tables, charts, graphs. Prepared in the Fuels and Mining Practice Division.
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- R85.—Laboratory study of gamma-ray spectra at the surface of rocks**, by A. F. Gregory, Geophysics Division, Geological Survey of Canada and J. L. Horwood. April, 1961. 52p. Tables, graphs. *Un résumé en français est inclus.* Prepared in the Mineral Sciences Division.
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Research Reports—*Continued.*

- R86.—**Influence of combined additions of tin, cadmium, antimony and copper on the structure and properties of galvanized coatings**, by J. J. Sebisty and R. H. Palmer. August, 1961. 52p. Illus., tables.
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- R88.—**Study of the Athabasca bitumen from the Abasand Quarry, Alberta, Canada. Part 2: Initial chromatographic separation of the pentane extract and the structure and properties of the resinous components**, by M. L. Boyd and D. S. Montgomery. December, 1961. 94p. Tables, graphs.
Un résumé en français est inclus.
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- R90.—**Measurement of the surface area of uranium dioxide powder**, by Pietro R. Gorla. (Reproduced from Nuclear Science and Engineering, v. 11, pp. 48-54, 1961.) January, 1961. 7p. Tables, figs.
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Research Reports.—Continued.

- R95.—Influence of uranium additions to ferrous alloys: an interim review.** Edited by R. F. Knight and D. K. Faurschou. April, 1962. 320p. Tables, figs.

Prepared by the Physical Metallurgy Division in collaboration with the Mineral Sciences Division, the Extraction Metallurgy Division, Eldorado Mining and Refining Limited and the Canadian Uranium Research Foundation.

This research program began in 1959 with the support of Eldorado Mining and Refining Limited. In January 1961 the producing uranium companies formed the Uranium Research Foundation, and since that time this group has contributed toward the programme being carried out at the Mines Branch. This report has been prepared to present, in general terms, the results of our work. A great deal of the research described is still under way, with new results being obtained daily from long time laboratory tests and plant trials.

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- R96.—Non-metallic thermal storage media,** by V. D. Svikis. February, 1962. 42p. Tables, graphs, figs.

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- R97.—Uranium in non-ferrous metals,** by R. Thomson and J. O. Edwards. July, 1962. 42p. Illus., tables, graphs.

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- R98.—Determination of methyl and methylene groups in the oil and resin fractions of Athabasca bitumen using infrared spectroscopy,** by F. E. Goodspeed and D. S. Montgomery. April, 1962. 25p. Tables, graphs.

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- R101.—I: Binary system Nb_2O_5 — SiO_2 ,** by Mohammad Ibrahim and N. F. H. Bright. **II: Binary system CaO — Nb_2O_5 ,** by Mohammad Ibrahim, N. F. H. Bright and J. F. Rowland. July 27, 1962. Pp. 221-222 and pp. 329-334. Illus., tables, graphs.

Prepared in the Mineral Sciences Division.

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Cat. No. M38-1/101

- R102.—Effect of some test bar variables on the mechanical properties of aluminum alloys,** by A. Couture and J. W. Meier. August, 1962. Released for general distribution, 1964. 36p. Tables, figs.

Prepared in the Physical Metallurgy Division.

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- R103.—**Resolution of the operating variables of a small hydrocyclone**, by R. F. Pilgrim and T. R. Ingraham. Reprinted from the Canadian Journal of Chemical Engineering, August, 1962. Pp. 169-172. Illus., tables, figs.
Prepared in the Extraction Metallurgy Division.
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- R104.—**Study of the Athabasca bitumen from the Abasand Quarry, Alberta, Canada. Part 3: Chromatographic separation of the oil fraction, and properties and structure of the oil components**, by M. L. Boyd and D. S. Montgomery. November, 1962. 67p. Tables, graphs.
Prepared in the Fuels and Mining Practice Division.
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Prepared in the Mineral Processing Division.
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Prepared in the Geophysics Division, Geological Survey of Canada and in the Mineral Sciences Division, Mines Branch.
\$1.25. *Cat. No. M38-1/110*

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- R112.—**Wodginite, a new tin-manganese tantalate from Wodgina, Australia and Bernic Lake, Manitoba**, by E. H. Nickel, J. F. Rowland and R. C. McAdam. Reprinted from the *Canadian mineralogist*, v. 7, pt. 3, pp. 390-402, 1963. June 10, 1963. [13p.] Tables, figs.
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- R113.—**Hot workability of alpha brasses**, by R. Thomson and J. O. Edwards. January, 1963. [3p.] Illus., tables.
Prepared in the Physical Metallurgy Division.
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- R114.—**Study of sedimented organic matter and its natural derivatives**, by L. H. King, Frances E. Goodspeed and D. S. Montgomery (with appendix by M. M. F. Millson). June, 1963. 68p. Tables, graphs.
Prepared in the Fuels and Mining Practice Division.
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- R115.—**Origin of the Albert Mines oil shale (New Brunswick) and its associated albertite**, by Lewis H. King. June, 1963. 24p. Illus., table, figs.
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- R116.—**On the origin of anthraxolite and impsonite**, by Lewis H. King. June, 1963. 9p. Illus.
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- R117.—**Electrical resistivity measurements on western Canadian coals**, by Lewis H. King. July, 1963. 33p. Tables, graphs.
Prepared in the Fuels and Mining Practice Division.
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- R118.—**Kinetic studies on the thermal decomposition of calcium carbonate**, by T. R. Ingraham and P. Marier. Reprinted from the *Canadian Journal of Chemical Engineering*, August, 1963. 4p. Figs.
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- R119.—**Dense lithium fluoride for gamma-ray-free neutron shielding**, by V. D. Svikis. February, 1964. 30p. Illus., tables.
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- R122.—Thermodynamic properties of zinc sulfate, zinc basic sulfate, and the system Zn-S-O, by T. R. Ingraham and H. H. Kellogg. Reprinted from Transactions of the Metallurgical Society of AIME, v. 227, December, 1963. 8p. Tables, figs.
Prepared in the Extraction Metallurgy Division.
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- R123.—Kinetics of the reaction of niobium pentachloride with water vapour, by T. R. Ingraham and B. J. P. Whalley. Reprinted from the Canadian Journal of Chemical Engineering, December, 1963. Pp. 265-268. Figs.
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- R124.—Ixiolite—a columbite substructure, by E. H. Nickel, J. F. Rowland and R. C. McAdam. Reprinted from the American Mineralogist, v. 48, Nos. 9 and 10, pp. 961-979, 1963. January 13, 1964. Tables, figs.
Prepared in the Mineral Sciences Division.
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- R125.—Hot-dip galvanizing with less common bath additions, by J. J. Sebisty and R. H. Palmer. February, 1964. 40p. Tables, figs.
Prepared in the Physical Metallurgy Division.
This paper was prepared for presentation at the seventh International Galvanizing Conference, Paris, France. June 1964.
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- R126.—Ion bombardment of single crystals of aluminum, by R. L. Cunningham, K. V. Gow and Joyce Ng-Yelim. Reprinted from Journal of Applied Physics, v. 34, No. 4 (Part I), pp. 984-989, April 1963. March, 1964. Figs.
Prepared in the Physical Metallurgy Division.
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- R131.—**Thorium intermediate member of the britholite-apatite series, physical and chemical studies**, by M. R. Hughson and J. G. Sen Gupta. Reprinted from the Journal of the Mineralogical Society of America. September 8, 1964. Pp. 937-951. Tables, figs.
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- R132.—**Study of the constitution of the titanium-rich corner of the titanium-aluminum-molybdenum system**, by A. J. Williams. September, 1964. 27p. Tables, figs.
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Prepared in the Mineral Processing Division.
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- R135.—**Experimental flotation cell**, by L. L. Sirois and T. Takamori. October, 1964. 6p. Tables, fig.
Prepared in the Mineral Processing Division.
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- R136.—**Mechanism of thermal decomposition of ammonium metavanadate**, by M. Taniguchi and T. R. Ingraham. Reprinted from Canadian Journal of Chemistry, v. 42, 1964. November, 1964. [7p.] Tables, figs.
Prepared in the Extraction Metallurgy Division.
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- R137.—**Split fractures in tension tests of steel**, by H. H. Bleakney. November, 1964. 16p. Tables, figs.
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Prepared in the Physical Metallurgy Division.
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- R139.—**Thermochemistry of the Co-S-O system from 950 to 1,200° K**, by T. R. Ingraham. Reprinted from Canadian Metallurgical Quarterly, v. 3, No. 3, July-September, 1964. November, 1964. [14p.] Tables, figs.
Prepared in the Extraction Metallurgy Division.
25c. *Cat. No. M38-1/139*
- R140.—**Properties of sand-cast magnesium alloys, Part 5: Mg-Zn-Ag-Zr alloys**, by B. Lagowski and J. W. Meier. October, 1964. 12p. Tables, figs.
Prepared in the Physical Metallurgy Division.
50c. *Cat. No. M38-1/140*
- R141.—**Magnesium content effect on properties of binary aluminum-magnesium alloys**, by W. A. Pollard. Reprinted from Trans. Afs 72, 587-599, 1964. November, 1964. [13p.] Graphs, figs.
Prepared in the Physical Metallurgy Division.
25c. *Cat. No. M38-1/141*
- R142.—**A brief study of nickel-rich alloys of the Ni-Hf-C and Ni-Zn-C systems**, by D. C. Briggs. November, 1964. 12p. Tables, figs.
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- R143.—**Kinetics of the carbon catalyzed air oxidation of ferrous ion in sulphuric acid solutions**, by G. Thomas and T. R. Ingraham. Reprinted from Unit Processes in Hydrometallurgy, vol. 1, Metallurgical Society of AIME, 1965. January, 1965. Pp. 67-79. Tables, figs.
Prepared in the Extraction Metallurgy Division.
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- R144.—**Orientation determinations of crystals using ejection patterns resulting from ion bombardment**, by R. L. Cunningham and Joyce Ng-Yelim. Reprinted from Journal of Applied Physics, vol. 35, No. 7, 2185-2188, July, 1964. January, 1965. [4p.] Figs.
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Prepared in the Mineral Sciences Division.
25c. *Cat. No. M38-1/145*

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Research Reports.—*Continued.*

- R146.—**Simplified apparatus and technique for the determination of crystal orientation by ion bombardment**, by R. L. Cunningham and Joyce Ng-Yelim. February, 1965. 7p. Figs.

Prepared in the Physical Metallurgy Division.

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Cat. No. M38-1/146

- R147.—**Thermodynamics of the thermal decomposition of cupric sulfate and cupric oxysulfate**, by T. R. Ingraham. Reprinted from Transactions of the Metallurgical Society of AIME, vol. 233, pp. 359-363, February, 1965. March, 1965. Tables, figs.

Prepared in the Extraction Metallurgy Division.

25c.

Cat. No. M38-1/147

- R148.—**Kinetics of the thermal decomposition of cupric sulfate and cupric oxysulfate**, by T. R. Ingraham and P. Marier. Reprinted from Transactions of the Metallurgical Society of AIME, vol. 233, pp. 363-367, February, 1965, March, 1965. Tables, figs.

Prepared in the Extraction Metallurgy Division.

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Cat. No. M38-1/148

- R149.—**Research in premium-quality castings in light alloys**, by J. W. Meier. January, 1965. 55p. Tables, graphs.

Prepared in the Physical Metallurgy Division.

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Cat. No. M38-1/149

- R150.—**Investigations on sand-cast aluminum alloy test bars**, by W. A. Pollard and J. W. Meier. January, 1965. Various paging. Illus., tables, graphs, figs.

Prepared in the Physical Metallurgy Division.

\$1.25.

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Bulletins techniques de la Direction des Mines. No TB1- , 1959- .

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TB62.—Addendum to Bureau of Mines report No. 826 (volumes 1-3, 1949), "Drilling and sampling of bituminous sands of Northern Alberta", by K. W. Bowles and R. G. Draper. December, 1964. 10p. Tables, fig. Prepared in the Fuels and Mining Practice Division.
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- TB64.—**Preparation of high-purity ammonium metavanadate from impure vanadium pentoxide by precipitation with ammonium chloride**, by J. A. Vezina and W. A. Gow. January, 1965. 16p. Tables, figs.
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- TB66.—**Investigation of fuel-oil additives to prevent superheater slagging in naval boilers**, by G. K. Lee, E. R. Mitchell, R. G. Grimsey and Lt. Comdr. S. E. Hopkins. Reprinted from Proceedings of the American Power Conference, v. 26, 1964. March, 1965. Pp. 531-552. Tables, figs.
Prepared in the Fuels and Mining Practice Division and in the Royal Canadian Navy.
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Proceedings of the rock mechanics symposium, held at McGill University, Montreal 7-8, 1962. Ottawa, 1963. 218p. Illus., tables, graphs. 25cm. Paper bound.

Published by Mines Branch.

Contents.—*Boundary stresses around an elliptical opening in an infinite solid.—Some physical properties of rocks and their relationship to uniaxial compressive strength.—Measurement of rock stress.—Investigations related to outbursts of coal and gas.—Mining research at Steep Rock Iron Mines Limited.—Ground control at the Creighton Mine of the International Nickel Company of Canada Limited.—Development of a model for a mine structure.—Some aspects of the use of pillars for mine support.—Rapporteur's summary.—Concluding remarks.*

\$4.

Cat. No. M37-462

Rock mechanics symposium, proceedings. Ottawa, 1964. 147p. Illus., tables, map, figs. 25cm. Paper bound.

Published by Mines Branch.

The symposium was held at Queen's University, Kingston, December 6-7, 1963. The program was laid on to serve three purposes. The first was to present papers on rock mechanics subjects for a rigorous examination by other workers in the field or associated fields. The second was to examine papers that described conditions that might be improved by rock mechanics work. The third was to acquaint the industry with projects underway in rock mechanics research.

\$3.25.

Cat. No. M37-663

Proceedings of the Boyer Conference (First conference on fuel technology in Canada), May 21-23, 1963. École Polytechnique, Université de Montréal, Montréal, Québec. Ottawa, 1964. 378p. Illus., tables, figs. 28cm. Paper bound. Bilingual.

This conference was sponsored by the Department of Mines and Technical Surveys, Ottawa, and the Institute of Combustion and Fuel Technology of Canada.

\$5.

Cat. No. M37-763

Comptes-rendus de la Conférence Boyer (Première conférence sur la technologie des combustibles au Canada), du 21 au 23 mai 1963, École Polytechnique, Université de Montréal, Montréal, Québec. Ottawa, 1964. 378p. Ill., tableaux, figs. 28cm. Cartonné. Bilingue.

Conférence, tenue sous les auspices du ministère des Mines et des Relevés techniques, Ottawa, et l'Institut de la combustion et de la technologie des combustibles du Canada.

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Proceedings of the Rock Mechanics Symposium held at University of Toronto, January 15-16, 1965. Ottawa, 1965. 204p. Illus., tables, figs. 25cm. Paper bound.

Published by Mines Branch.

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Annual Mineral Reviews: Annual preliminary mineral reviews on metallics, industrial minerals and fuel commodities are prepared in collaboration with the Mines Branch. Initially published as separates, the reviews are later revised, bound in book form, and released as a Mineral Report for the year concerned.

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Published by the Mineral Resources Division.

Publiés par la Division des ressources minérales.

1.—Canadian mineral industry, 1956. 1960. 447p. Tables, graphs.

Prepared in collaboration with the Mines Branch.

Earlier publications of this nature and under the same title appeared as Mines Branch Reports, the first for 1934 and the last for 1955. Like the previous issues, the present volume contains reviews of the metallic minerals, industrial minerals and mineral fuels produced or consumed in commercial quantities in Canada during the year concerned. The reviews are the final versions of preliminary papers issued during 1957.

\$1.30

Cat. No. M38-5/1

1.—Industrie minière du Canada en 1956. 1961. 496p. Ill., tableaux, graphiques, cartes.

Le présent exposé traite surtout des progrès faits en 1956 par l'industrie minière du Canada mais il insiste passablement toutefois sur l'expansion que cette industrie a prise au cours des 30 dernières années.

\$1.30

N° de cat. M38-5/1F

2.—Canadian mineral industry, 1957. 1960. 491p. Illus., tables, graphs, maps.

Prepared with the collaboration of the Mines Branch.

This annual report contains reviews of the metallic minerals, industrial minerals and mineral fuels produced or consumed in commercial quantities in Canada during 1957.

\$1.30

Cat. No. M38-5/2

2.—Industrie minière du Canada en 1957. 1961. 549p. Ill., tableaux, graphiques, cartes.

Le présent rapport annuel contient des revues rétrospectives de la production et de la consommation des minéraux métalliques, des minéraux industriels et des combustibles minéraux au Canada en 1957.

\$1.30

N° de cat. M38-5/2F

3.—Platinum metals, by C. C. Allen. 1960. 68p. Illus., tables, graphs, maps.

This publication was designed to present, against a brief historical background, a comprehensive survey of recent technical and economic progress relative to the production and use of the platinum metals in their various forms.

\$1.30

Cat. No. M38-5/3

3.—Métaux du groupe platine, par C. C. Allen. 1960. 74p. Ill., tableaux, graphiques, cartes.

En rappelant brièvement l'histoire de ces métaux, la présente publication voudrait faire le point des progrès techniques et économiques récents dans la production et l'utilisation des métaux du groupe platine sous leurs diverses formes.

\$1.30

N° de cat. M38-5/3F

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

Mineral Reports.—Continued.

Rapports miniers.—Suite.

- 4.—**Canadian mineral industry, 1958.** 1961. 508p. Illus., tables, graphs, maps.

This annual report contains reviews of the metallic minerals, industrial minerals and mineral fuels produced or consumed in commercial quantities in Canada during 1958.

\$2.50

Cat. No. M38-5/4

- 4.—**Industrie minière du Canada en 1958.** 1962. 532p. Ill., tableaux, graphiques, cartes.

Le présent rapport annuel contient des aperçus sur les minéraux métalliques, les minéraux industriels et les combustibles produits ou consommés en quantités marchandes au Canada en 1958.

\$3.25.

Nº de cat. M38-5/4F

- 5.—**Canadian mineral industry, 1959.** Ottawa, 1962. 515p. Illus., tables, graphs, maps.

This annual report contains reviews of the metallic minerals, industrial minerals and mineral fuels produced or consumed in commercial quantities in Canada during 1959.

\$2.50

Cat. No. M38-5/5

- 5.—**Industrie minière du Canada en 1959.** 1963. 530p. Ill., tableaux, graphiques, cartes.

Le présent rapport annuel contient des aperçus sur les minéraux métalliques et industriels ainsi que sur les combustibles produits et consommés en quantités marchandes au Canada en 1959.

\$2.50.

Nº de cat. M38-5/5F

ANNUAL PRELIMINARY MINERAL REVIEWS

- Advance chapters, in preliminary form, of *The Canadian Mineral Industry*.
- Dealing with some sixty mineral commodities produced or consumed in commercial quantities in Canada during the year.
- Concise and topical.

Available free of charge from the Publication Distribution Office,
Mines Branch and Mineral Resources Division,
Department of Energy, Mines and Resources,
Ottawa.

MINERAL RESOURCES DIVISION PUBLICATIONS

Mineral Reports.—Continued.

Rapports miniers.—Suite.

- 6.—**Molybdenum**, by V. B. Schneider. 1963. 176p. Illus., tables, figs.

This publication was designed to present a description of Canadian molybdenum resources, a summary of the metal's early development, an outline of its industrial applications, and an analysis of its present demand and future prospects.

\$2.

Cat. No. M38-5/6

- 7.—**Canadian mineral industry, 1960.** 1963. 605p. Illus., tables, graphs, maps.

This volume contains reviews of fifty-seven metallic minerals, industrial minerals and mineral fuels produced or consumed in commercial quantities in Canada during 1960. These reviews are preceded by a general article dealing with the overall economic and technical factors characteristic of the mineral industry during the year.

\$5.

Cat. No. M38-5/7

- 7.—**Industrie minière du Canada en 1960.** 1964. 604p. Ill., tableaux, graphiques, cartes.

Le présent volume contient des exposés sommaires sur 57 minéraux métallifères, minéraux industriels et combustibles, minéraux produits ou consommés en quantités marchandes au Canada en 1960. Ces exposés sont précédés de généralités sur l'ensemble des facteurs économiques et techniques marquants de l'industrie minière, au cours de l'année.

\$5

Nº de cat. M38-5/7F

- 8.—**Canadian mineral industry, 1961.** 1963. 441p. Illus., tables, graphs, maps.

This book contains in revised form, 57 mineral reviews originally issued as separates during 1962. The reviews deal with exploration and development, production, consumption, trade and technical matters in regard to specific minerals of current or potential importance in the Canadian economy.

\$5.

Cat. No. M38-5/8

- 8.—**Industrie minière du Canada en 1961.** 1965. 627p. Ill., tableaux, graphiques, cartes.

Cet ouvrage comprend 57 rapports révisés sur les minéraux, qui ont d'abord paru séparément en 1962. Ces rapports traitent des sujets suivants: exploration et mise en valeur, production, consommation, commerce et aspects techniques relatifs de minéraux qui sont ou qui peuvent devenir importants pour l'économie canadienne.

\$5.

Nº de cat. M38-5/8F

- 9.—**Canadian minerals yearbook, 1962.** 1964. 626p. Illus., tables, figs. Col. map (in pocket).

\$5.

Cat. No. M38-5/9

- 9.—**Annuaire des minéraux au Canada, 1962.** 1965. 664p. Ill., tableaux, graphiques, cartes (1 pliée dans pochette).

\$5.

Nº de cat. M38-5/9F

- 10.—**Canadian minerals yearbook, 1963.** 1965. 640p. Illus., tables, graphs, maps (1 folded in pocket).

This book consists of a number of individual mineral review chapters issued separately and in advance of the Yearbook itself. Content covers economic-engineering-resources developments in the Canadian mineral industry during the year concerned.

\$5.

Cat. No. M38-5/10

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

Mineral reports.—Continued.

Rapports miniers.—Suite.

- 10.—**Annuaire des minéraux du Canada, 1963.** 1966. 705p. Ill., tableaux, graphiques, cartes (1 pliée dans pochette).

Cette publication renferme une revue des faits nouveaux dans le domaine de l'économie, du génie et des ressources qui se sont produits au cours de l'année. Comme dans le passé, l'Annuaire consiste en une série de rapports préliminaires sur chaque minéral en particulier publiés séparément avant l'Annuaire lui-même.

\$5.

N^o de cat. M38-5/10F

- 11.—**Canadian minerals yearbook, 1964.** 1966. 744p. Illus., tables, graphs, maps (1 folded in pocket).

This yearbook describes the Canadian mineral industry in 1964 in terms of the more than 65 mineral commodities produced or consumed in significant quantities in Canada. Exploration and development, production, processing, markets, trade, consumption, uses and world trends are discussed.

\$5.

Cat. No. M38-5/11

MINERAL RESOURCES DIVISION PUBLICATIONS

MINERAL SURVEYS

Mineral Surveys. No. MS1- , 1962- .

- 1.—**Canadian underground mine haulage**, by Amil Dubnie. 1965. 74p. Illus., tables, figs.

This report is designed to focus attention upon ore-handling methods in Canadian mines, an activity in which the impact of technological advances is likely to be forcibly felt.

\$2.

Cat. No. M38-6/1

- 2.—**Transportation and the competitive position of selected Canadian minerals**, by A. Dubnie. 1962. 140p. Illus., tables, maps (3 folded in pocket).

This survey is a broad, general study of the transportation of Canadian minerals. It is hoped that it will be useful to all mineral producers as a guide in their efforts to reduce the cost of transportation.

\$1.

Cat. No. M38-6/2

- 3.—**Silver in Canada**, by J. W. Patterson. 1963. 110p. Illus., tables, graphs, figs. (2 fold.).

This report deals with the history of the Canadian silver industry, its geology and reserves, production methods and output, consumption and trade. It also contains a summary of the world industry.

\$1.50.

Cat. No. M38-6/3

- 4.—**Open pit mining practice in Canada**, by Amil Dubnie. 1964. 93p. Illus., tables, figs.

This publication provides a general survey of the equipment, methods, and costs of open-pit mining in Canada. The objective has been to provide a basic understanding of current Canadian practice. Considerable descriptive material has been included to assist those who are unfamiliar with mining.

\$2.

Cat. No. M38-6/4

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

Mineral Surveys.—*Continued.*

MINERAL RESOURCES DIVISION PUBLICATIONS

MINERAL INFORMATION BULLETINS

Mineral Information Bulletins. No. MR27- , 1958- .

Prepared by the Mineral Resources Division.

MR27.—Survey of the iron ore industry in Canada during 1957, by T. H. Janes and R. B. Elver. June, 1958. 116p. Tables, graphs, maps. 28cm. Processed. Paper cover.

This publication provides a detailed study of the production, trade and developments of the iron ore industry in Canada during 1957. Maps showing the properties in production, properties under development for production within the next few years, and properties on which exploration of iron-bearing material is taking place are included.

35c.

Cat. No. M38-2/27

MR28.—Iron ore and other raw material sources for a primary iron and steel industry in Western Canada, by T. H. Janes. Ottawa, April, 1958. 10p. Tables, map.

Free.

Cat. No. M38-2/28

MR29.—Mineral legislation, 1958, compiled by E. C. Hodgson. December 12, 1958. 11p. 28cm. Processed. Paper cover.

This publication attempts to catalogue the more important changes in legislation and other governmental actions which have affected in a direct manner the Canadian mineral industry excluding petroleum and natural gas during the past year.

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Cat. No. M38-2/29

MR30.—Summary review of federal taxation and certain other federal legislation affecting mining, oil and natural gas enterprises in Canada, compiled by E. C. Hodgson. January 8, 1959. 23p. 28cm. Processed. Paper cover.

Prepared with the co-operation and guidance of the Department of National Revenue and of the various Departments concerned.

35c.

Cat. No. M38-2/30

MR31.—Survey of the Canadian iron ore industry during 1958, by T. H. Janes and R. B. Elver. June, 1959. 148p. Tables, graphs, maps.

75c.

Cat. No. M38-2/31

MR32.—Survey of the primary zinc industry in Canada in 1958, by D. B. Fraser. August, 1959. 69p. Tables, graphs, map. 28cm. Processed. Paper cover.

This publication provides detailed information on the sources of primary production, trade, and consumption of zinc in Canada in 1958.

75c.

Cat. No. M38-2/32

MR33.—Markets for iron and steel products in Western Canada, by T. H. Janes. September, 1959. 28p. Tables. Processed. Paper cover.

This publication briefly lists the rolling mill capacities of the primary iron and steel producers of Western Canada. It provides information, in some detail, on the consumption of steel rolling mill products, by kind, of the four western provinces.

35c.

Cat. No. M38-2/33

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

Mineral Information Bulletins.—Continued.

MR34.—Survey of the uranium industry in Canada, by J. W. Griffith. November, 1959. 94p. Tables, graph, maps, diagrs. Processed. Paper cover.

Contents.—Introduction.—Producers and former producers.—Mining methods.—Ore treatment processes.—Production costs.—Refining.—Prices.—Markets.—Uses and requirements.—World resources and production of uranium.—Thorium in Canada.

75c.

Cat. No. M38-2/34

MR35.—Survey of the petroleum industry in Canada, 1957 and 1958, by R. A. Simpson and R. L. Borden. June, 1959. 84p. Tables, graphs, maps. Processed. Paper cover.

Contents.—General summary.—Exploration and development.—Reserves of liquid hydrocarbons.—Development by provinces.—Transportation and storage.—Petroleum processing.—Marketing.—Supply and demand of all oils.—World statistics.

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Cat. No. M38-2/35

MR36.—Survey of the steel pipe and tube industry of Canada, by T. H. Janes. October, 1959. 46p. Illus., tables. Paper cover.

Contents.—Historical.—General.—Production, trade and consumption.—Canadian industry.—Specifications for steel pipe and tubing.—Methods of manufacture.—Oil and gas pipeline mileage in Canada.—Future of the industry.

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Cat. No. M38-2/36

MR37.—Survey of the copper industry in Canada, 1958, by A. F. Killin. October, 1959. 108p. Tables, graphs, map. Paper cover.

Contents.—General summary.—Copper producers in 1958.—Reserves of copper as related to production.—World mine production.—Domestic consumption and uses.—Prices.—Tariffs.

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Cat. No. M38-2/37

MR38.—Some economic factors affecting Northern mineral development in Canada, by Amil Dubnie. December, 1959. 61p. Map fold. Paper cover.

The first part of this paper provides a description of prevailing northern conditions, with particular emphasis on those conditions which affect mining operations. The second part of the paper presents some detail on northern mining experience.

Out of print.

Cat. No. M38-2/38

MR39.—Survey of the natural gas industry in Canada 1957-1959, by R. A. Simpson and R. L. Borden. 1960. 82p. Tables, graphs, figs. (1 folded in pocket).

75c.

Cat. No. M38-2/39

MR40.—St. Lawrence Seaway and the Canadian mineral industry with particular reference to iron ore, by R. B. Elver. February, 1960. 21p. Tables, map.

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Cat. No. M38-2/40

MR41.—Direct iron processes and their prospects in Eastern Canada, by R. B. Elver. March, 1960. 63p. Illus., tables, graph, map.

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Cat. No. M38-2/41

MINERAL RESOURCES DIVISION PUBLICATIONS

Mineral Information Bulletins.—Continued.

- MR42.—Summary review of federal taxation and legislation affecting the Canadian mineral industry, compiled by E. C. Hodgson. Revised February 3, 1961. 30p.

This booklet is a summary of certain Federal legislation affecting mining, oil and gas enterprises in Canada.

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Cat. No. M38-2/42

- MR43.—Survey of the primary zinc industry in Canada, 1959, by D. B. Fraser. 1960. 84p. Tables, graphs, map.

This publication provides detailed information on primary production, trade and consumption of zinc in Canada in 1959.

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Cat. No. M38-2/43

- MR44.—Survey of the uranium industry in Canada, 1959, by J. W. Griffith. 1960. 46p. Illus., tables, graph, maps.

This bulletin is a summary of developments in the industry for the year 1959 but includes some developments up to the end of September 1960, and estimates of future production. It also deals with statistics on production for 1959 and 1958, ore reserves, costs, refining, prices, markets, world production and reserves, and a brief outline of thorium in Canada.

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Cat. No. M38-2/44

- MR45.—Survey of the Canadian iron ore industry during 1959, by R. B. Elver. 1960. 121p. Tables, graphs, maps.

Out of print.

Cat. No. M38-2/45

- MR46.—Primary iron and steel industry in Canada, by T. H. Janes and G. E. Wittur. Ottawa, 1962. 79p. Illus., tables, graph.

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Cat. No. M38-2/46

- MR47.—Survey of the copper industry in Canada, 1959, by A. F. Killin. 1960. 107p. Tables, graph, map.

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Cat. No. M38-2/47

- MR48.—Survey of the petroleum industry in Canada, 1959, by R. A. Simpson, D. M. Nowlan and D. W. Rutledge, 1961. 82p. Tables, graphs, maps.

This survey covers the main developments in 1959 and presents an interrelated review of progress in each of the four principal sectors of the industry; exploration, development and production; transportation and storage; petroleum processing; and marketing.

75c.

Cat. No. M38-2/48

- MR49.—Preliminary survey of the Canadian mineral industry in 1960. (Reprinted from February, 1961 issue of Canadian Mining Journal) 1961. 38p. Illus., tables, graphs.

Out of print.

Cat. No. M38-2/49

- MR50.—Transportation of minerals in Northern Canada, by Amil Dubnie. 1961. 20p. Tables, map fold.

As the cost of transportation is a major factor in northern mineral development, this paper examines the existing transportation facilities in the northern areas of Canada.

75c.

Cat. No. M38-2/50

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

Mineral Information Bulletins.—Continued.

- MR51.—**Canadian iron ore industry in 1960**, by R. B. Elver, 1961. 107p. Illus., tables, graphs, maps.
75c. Cat. No. M38-2/51
- MR52.—**Survey of the petroleum industry in Canada in 1960**, by R. A. Simpson, D. M. Nowlan and D. W. Rutledge. 1961. 91p. Tables, graphs, maps.
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- MR53.—**Lead and zinc in Canada**, by D. B. Fraser and J. W. Patterson. 1961. 82p. Illus., tables, graphs, charts, map.
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- MR54.—**Survey of the copper mining industry in Canada, 1960**, by A. F. Killin. 1962. 77p. Illus., tables, graphs, maps.
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- MR55.—**Natural gas industry in Canada, 1960**, by R. A. Simpson, D. M. Nowlan and D. W. Rutledge. 1961. 55p. Tables, graphs, maps.
This survey presents an interrelated review of each of five principal sectors: production and reserves; exploration and development; natural gas processing; transportation and storage; marketing and trade.
75c. Cat. No. M38-2/55
- MR56.—**Preliminary survey of the Canadian mineral industry in 1961**. Reprinted from Canadian Mining Journal, February, 1962. 48p. Illus., graphs.
Prepared in the Mineral Resources Division and Mines Branch.
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- MR57.—**Demand for energy in the Atlantic Provinces, 1950-1980**, by D. M. Nowlan, 1962. 113p. Tables, graphs, 1 folded chart.
This bulletin gives a detailed study of current trends and an assessment of the future outlook for energy demand.
\$1.30. Cat. No. M38-2/57
- MR58.—**Survey of the mineral industry of Southern Africa**, by R. B. Toombs. 1962. 275p. Illus., tables, figs, maps. (3 folded in pocket).
This survey of the mineral industry of southern Africa has been prepared as a record of the Seventh Commonwealth Mining and Metallurgical Congress which was held in southern Africa during the period April 10-May 21, 1961. The Congress afforded the author an opportunity of visiting one of the important mineral regions of the world. To the extent that is possible from a relatively brief period of observation, this report describes the mineral industry of southern Africa and its economic environment.
\$2.50. Cat. No. M38-2/58
- MR59.—**Canadian iron ore industry in 1961**, by R. B. Elver and G. E. Wittur. 1962. 103p. Illus., tables, graphs, maps.
This publication provides a detailed study of developments, production and trade in the iron ore industry of Canada during 1961.
75c. Cat. No. M38-2/59

MINERAL RESOURCES DIVISION PUBLICATIONS

Mineral Information Bulletins.—Continued.

- MR60.—Lead and zinc in Canada, 1961**, by D. B. Fraser and J. W. Patterson. 1963. 90p. Illus., tables, graphs, maps.

This publication serves mainly to provide detailed information on primary production, trade and consumption of lead and zinc in Canada in 1961, but trends in the lead and zinc industries are shown in historical tables which go back many years to a period when production was almost negligible.

75c.

Cat. No. M38-2/60

- MR61.—Chromium industry — Canada and the world**, by V. B. Schneider. 1963. 64p. Illus., tables, maps.

This bulletin describes, in summary form the Canadian chromium industry and includes a description of known domestic occurrences of chromite and past producing areas. It also outlines briefly world chromite deposits and trade. Sections describe mining, beneficiation, uses and specifications of chromite, uses and characteristics of chromium additives in steelmaking and the uses of chromium in the chemical industry.

75c.

Cat. No. M38-2/61

- MR62.—Survey of the petroleum industry in Canada in 1961**, by R. A. Simpson, D. W. Rutledge and D. M. Nowlan. 1963. 96p. Tables, graphs, maps.

This survey of the petroleum industry in Canada covers the main developments in 1961 and presents an interrelated review of progress in each of the four principal sectors of the industry: exploration, development and production; transportation and storage; petroleum processing; and marketing.

75c.

Cat. No. M38-2/62

- MR63.—Preliminary survey of the Canadian mineral industry in 1962.** Reprinted from February, 1963 issue of Canadian Mining Journal. 1963. 48p. Illus., tables, graphs.

35c.

Cat. No. M38-2/63

- MR64.—Mineral development policy**, by W. Keith Buck. 1963. 14p.

Contents.—Summary.—Introduction.—Minerals jurisdiction.—Tax incentives.—Government services.—Subsidies.—Bounties.—Government participation in mining and oil enterprises.—Commissions of enquiry into broad regional and national problems.—Education.—Conclusions.

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Cat. No. M38-2/64

- MR65.—Steel industry of the Prairie Provinces**, by T. H. Janes and R. B. Elver. 1963. 36p. Tables, maps.

Contents.—Primary iron and steel industry of the Prairie Provinces.—Consumption of steel rolling mill products.—Pipe requirements of oil and gas industries.—Steel pipe and tube industry.—Employment.

75c.

Cat. No. M38-2/65

- MR66.—Technical and economic factors in the choice of steel plant location**, by R. B. Elver, T. H. Janes and J. H. Walsh. 1963. 12p.

75c.

Cat. No. M38-2/66

- MR67.—Canadian iron ore industry in 1962**, by R. B. Elver. 1963. 100p. Illus., tables, graphs, maps.

\$1.

Cat. No. M38-2/67

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

Mineral Information Bulletins.—Continued.

MR68.—Canadian copper industry in 1962, by A. F. Killin. 1963. 108p. Illus., tables, graphs, maps.
\$1. Cat. No. M38-2/68

MR69.—Canadian nonferrous mineral industry in relation to the European Economic Community. 1963. 78p. Tables, graphs, maps.
75c. Cat. No. M38-2/69

MR70.—Canadian steel industry: a pattern of growth, by W. Keith Buck and R. B. Elver. 1964. 18p. Illus., graph, map.
This paper describes the establishment and growth of the Canadian primary iron and steel industry within the context of Canadian economic development. It was prepared at the request of the United Nations Centre for Industrial Development for presentation at the United Nations Inter-regional Symposium on the Application of Modern Technical Practices in the Iron and Steel Industry in Developing Countries. The Symposium was held in Prague, Czechoslovakia and Geneva, Switzerland from November 11-26, 1963, inclusive.
\$1. Cat. No. M38-2/70

MR71.—Canadian mineral industry in 1963: preliminary. Reprinted from February, 1964 issue of Canadian Mining Journal. 1964. 53p. Tables, graphs.
50c. Cat. No. M38-2/71

MR72.—Natural gas industry in Canada 1961 and 1962, by R. A. Simpson and D. W. Rutledge. 1964. 71p. Tables, figs., map.
Prepared in the Mineral Resources Division.
\$1. Cat. No. M36-2/72

MR73.—Summary review of federal taxation and legislation affecting the Canadian mineral industry, compiled by E. C. Hodgson and W. J. Beard. Revised February, 1964. 27p.
Prepared with the co-operation and guidance of the Department of National Revenue and of the various Departments concerned.
\$1. Cat. No. M38-2/73

MR74.—Economic aspects of iron ore in a changing market, by R. B. Elver. 1964. 32p. Tables, figs., map.
This paper analyses the forces that have caused the major changes in world iron ore production and trading patterns since World War II. Future trends are also considered.
75c. Cat. No. M38-2/74

MR75.—Canadian minerals in national and international perspective, by R. B. Toombs. 1966. 63p. Tables, graphs.
This study is designed to describe the growth and present status of the Canadian mineral industry and to measure its importance in the Canadian economy in the world mineral industry.
\$1. Cat. No. M38-2/75

MR76.—Canadian iron ore industry, 1963, by G. E. Wittur. 1964. 98p. Illus., tables, graphs, maps.
This publication provides a detailed study of developments, production and trade in the iron ore industry of Canada during 1963.
\$1. Cat. No. M38-2/76

MINERAL RESOURCES DIVISION PUBLICATIONS

Mineral Information Bulletins.—*Continued.*

MR77.—**Canadian resources of uranium and thorium**, by J. W. Griffith and S. M. Roscoe. 1964. 12p. Illus., tables, maps.

This paper was prepared in order to attract the attention of countries, which are short of uranium and thorium, to Canada as a source of supply for their growing nuclear power programs. It presents a compilation of present reserves as well as a detailed assessment of future reserves—all in terms of economic criteria.

50c.

Cat. No. M38-2/77

MR78.—**Survey of the petroleum industry in Canada, 1962 and 1963**, by R. A. Simpson and D. W. Rutledge. 1965. 125p. Illus., tables, graphs, maps (1 folded).

Prepared in the Mineral Resources Division.

\$1.

Cat. No. M38-2/78

MR79.—**Canadian mineral industry in 1964: preliminary**. Reprinted from Canadian Mining Journal, February, 1965. 65p. Illus., tables, graphs.

Prepared in the Mineral Resources Division and Mines Branch.

35c.

Cat. No. M38-2/79

MR80.—**Canadian iron ore industry, 1964**, by G. E. Wittur. 1965. 110p. Illus., tables, graph, maps. 25cm.

This annual publication contains pertinent statistics and comments for 1964 and earlier years on the Canadian iron ore industry, including production, shipments, exports, imports, consumption, productive capacity and reserves.

\$1.

Cat. No. M38-2/80

MR82.—**Summary review, federal taxation and legislation affecting the Canadian mineral industry**. Compiled by E. C. Hodgson and W. J. Beard. Revised, January, 1966. 25p. 25cm.

\$1.

Cat. No. M38-2/82

MR84.—**Mercury in Canada in international perspective, 1966**, by J. G. George. 1966. 20p. Figs., maps. 25cm.

50c.

Cat. No. M38-2/84

MR85.—**Canadian iron ore industry, 1965**, by C. J. Gauvin and V. B. Schneider. 1967. 149p. Illus., tables, graphs, map, 25cm. Processed.

\$1.

Cat. No. M38-2/85

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Mineral Information Bulletins.—*Continued.*

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Aluminum.....	<i>W. H. Jackson</i>
Antimony.....	<i>D. B. Fraser</i>
Asbestos.....	<i>A. A. Winer</i>
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Bentonite.....	<i>J. E. Reeves</i>
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RAPPORTS DIVERS

Minéralogie pratique et industrie minérale, par Jean-Paul Drolet, ingénieur des mines. Tiré à part du Jeune scientifique (ACFAS), v. 3, n^{os} 1 à 8. Ottawa, 1966, 50p. Ill., tableaux, carte des principales régions minières du Canada, pliée dans pochette. 28cm. Broché.

Ces éléments de minéralogie pratique ont pour objet de fournir à ceux que les minéraux et l'industrie minérale intéressent une initiation scientifique à cette partie des sciences naturelles ainsi que quelques renseignements sur les mines du Canada.
Gratuit. N^o de cat. M22-2365F

Entrance awards for mineral industry courses at Canadian universities and technological institutes. Ottawa, revised 1966. 22p. Illus. 25cm. Paper cover.

Produced by the Education Committee of the Canadian Institute of Mining and Metallurgy and by the Canadian Metal Mining Association.

This booklet was prepared to draw to the attention of young people the professional opportunities which the mineral industry offers.

Free.

Cat. No. M39-166

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Part V

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or as an appendix to the report cited.
- R.M.....Maps

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- M.S.....Memorandum

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- T.P.....Technical Paper

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- MR.....Mineral Maps

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dans R.....Article formant une partie d'un rapport général,
v.g. Rapports sommaires ou appendice au rap-
port mentionné dans la référence.

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2. Mémoires (p. 125 à 138)

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3. "Technical Papers" (p. 139 et 140) En anglais seulement

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